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ABSTRACT

Detailed findings are presented from the National Science Foundation's 1981 Survey of Scientific and Engineering Personnel Employed at Universities and Colleges. Information on characteristics of scientists and engineers employed by approximately 2,200 higher education institutions and data from 19 university-administered federally-funded research and development centers are presented. This year's tables include 2-year trend tables (1980 and 1981) showing the number of women and men employed part time as scientists and engineers in higher education institutions. These data are displayed by science and/or engineering (S/E) field. The national total of 333,000 scientists and engineers employed by academic institutions includes an estimate amounting to 19 percent of the total to account for nonresponding institutions. These data calculated by estimation are identified accordingly. Information is provided on trends in employment of scientists and engineers in higher education institutions; faculty by field, employment status, institutional control, educational attainment, type of institution, and sex; institutional rankings by status and full-time equivalents; the top 100 doctorate-granting institutions, January 1980 and January 1981; geographic data; full-time equivalents (1980 and 1981); male and female faculty by part-time and full-time status, field of study, type of institution, and institutional ranking. Summaries are presented by type of institutions (degrees offered, public/private) for the specific kinds of engineers and scientists (physical, environmental, mathematical, life scientists, social scientists, and psychologists). A sample questionnaire and instructions are appended. (SW)

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general notes

This publication presents the results of the National Science Foundation's (NSF's) Survey of Scientific and Engineering Personnel Employed at Universities and Colleges, January 1981. A *Science Resources Studies Highlights* analyzing the results of this survey will be published later this year.

The tables included here present statistics on the characteristics of scientists and engineers employed by approximately 2,200 institutions of higher education; data from 19 university-administered federally funded research and development centers (FFRDC's) are tabulated separately.

The terms "imputation" or "imputed data" refer to the computerized process of developing estimates of missing information from institutions that did not furnish such statistics when requested. This process develops estimates based primarily on key data items reported in surveys of prior years when available, or when not available, estimates are based on figures derived according to peer respondent institutions' characteristics (of highest degree granted and type of institutional control—public or private). Corresponding items are increased or decreased to reflect growth or shrinkage experienced by similar peer institutions.

A major innovation in this year's tables is the inclusion of 2-year trend tables (1980 and 1981) showing the number of women and men employed part time as scientists and engineers in higher education institutions. These data are displayed by science and/or engineering (S/E) field. Data on full-time S/E employment by discipline and sex have been available from this survey since 1974.

Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior-year data are reviewed for consistency with current-year responses and, when necessary, revised in consultation with institutional respondents, reference to prior-year data should be restricted to this document.

See section A, technical notes, for a detailed description of the survey universe, methodology, and limitations of the data; section B for the statistical tables; section C for the survey summary data; section D for the university-administered FFRDC's; and section E for reproductions of the covering letter, questionnaire, and instructions.

Requests for additional information concerning the survey findings and for data tapes for the 1981 and prior survey years should be directed to:

Ms. Judith F. Coakley
or Ms. Esther Gist
Universities and Nonprofit Institutions Studies Group
Division of Science Resources Studies
National Science Foundation
Washington, D.C. 20550
(202) 634-4673

section a

technical notes

scope of survey

The survey questionnaires were mailed in February 1981 to more than 2,200 institutions of higher education and 19 university-administered FFRDC's. These "FFRDC's" are centers supported by the Federal Government either to meet specific R&D objectives or to provide major facilities for research and associated training purposes. To qualify as a unit in this category, the center must be engaged in basic or applied research, development, or management of R&D activities, monitored directly by the Federal Government, usually a single agency; this relationship is expected to be maintained on a long-term basis. An FFRDC must operate separately from its administrative organization or be incorporated separately. With an average annual budget of at least $500,000 (operating and capital equipment) 70 percent of which is Federal support, the center's facilities are owned or funded under contract by the Federal Government.

The survey universe included all institutions of higher education, including 2-year institutions, that were identified by NSF as offering S/E degree-credit courses. The survey excluded schools of art, music, law, and theology, and all others that do not employ scientists or engineers.

Prior to mailout, the population of institutions to be surveyed was reviewed to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., reviewed for changes in highest degree granted, or for school openings, closings, or mergers). Names of institutions newly added to the *Education Directory, Colleges and Universities, 1980-81*[1] were revised to determine their eligibility for inclusion in this survey. In 1981 seven institutions were added to the universe and four were deleted during the review process. At survey closeout on July 15, 1981, 2,226 universities and colleges and 19 FFRDC's comprised the survey population. Of the 2,226 institutions, 60 percent responded, about the same rate as in 1980 (table A-1). Of the doctorate-granting institutions surveyed, 88 percent responded in 1981 compared to 83 percent in 1980. The relatively high rate of response for these institutions provides NSF with a high level of confidence in the published results.

[1]Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1980-81* (NCES 81-347) (Washington, D.C.: Supt. of Documents, U.S. Government Printing Office).

Table A-1. Science/engineering personnel survey response rates by type of institution: January 1981

Type of institution	Number surveyed	Number of respondents	Percent of total
Total	2,226	1,324	59.5
Doctorate	323	286	88.5
Master's	321	238	74.1
Bachelor's and no science degree	1,582	800	50.6

SOURCE: National Science Foundation

survey items

No new survey items were added in 1981. A few minor changes did occur, however, resulting from a review of data needs and recordkeeping practices of major universities. NSF no longer collects data separately on the number of professionals in science and engineering that hold the Doctorate in Education (item 1). These totals are now merged with all doctorate degree-holders reported in line (a). In addition, several of the degree classification titles have been reworded to conform to standard postsecondary student terminology developed/used by the National Center for Education Statistics. In items 2 and

3 detailed subfields have been alphabetized. Columns 1; 2, and 3 in item 3 have been classified as "optional" since they repeat the information collected in items 1 and 2 and will be eliminated in future questionnaires.

In the interest of improving the data quality and as an aid to institution personnel responsible for completing NSF annual survey questionnaires, 1-day workshops are held periodically in various geographic locations prior to the mailout date. The workshops serve as a forum to discuss survey forms and methods used to gather information from institution's personnel records. These workshops, sponsored by volunteer respondent institutions or professional societies, are conducted by NSF staff assisted by institutional staff experienced in survey completion.

estimates for nonresponse

The national total of 333,000 scientists and engineers employed by academic institutions includes an estimate amounting to 19 percent of the total to account for approximately 40 percent of the survey population that did not respond (table A-2). The estimating process, referred to as "imputation," has been used consistently since 1977. In this publication, the letter "I" is used to identify imputed data; and the letter "E" is used when respondent institutions indicated that their data were estimated or when data required slight adjustments to distributed evenly.

The imputation rate for full-time-equivalent (FTE) scientists and engineers involved in separately budgeted R&D activities was also 19 percent (table A-3). Steady improvement has occurred in reporting these data, however, as universities have developed better recordkeeping systems to identify the extent of these R&D activities by S/E disciplines.

The largest number of nonrespondent institutions occurs among smaller sized schools. In approximately 200 of these institutions, no resoponse to this survey has been received for three or more years. As a result, the imputed data for these institutions should be used with caution. In order to correct this situation, a concerted effort will be made during the coming January 1982 survey cycle to solicit assistance from the presidents or chancellors of these long-term nonrespondent institutions in obtaining S/E personnel data.

Table A-2. Science/engineering personnel survey imputed and estimated amounts by field, employment status, and activity: January 1981

Disciplines	Total	Full time	Part time	Total equivalents (FTE's)[1]	FTE's devoted to separately budgeted R&D activities
Scientists and engineers, total	62,368	43,996	18,307	72,680	10,938
Engineers, total	5,329	3,572	1,746	6,187	1,196
Aeronautical/astronautical engineers	167	122	45	206	88
Chemical engineers	264	200	64	300	93
Civil engineers	916	616	297	1,083	106
Electrical engineers	1,518	987	524	1,643	276
Mechanical engineers	1,203	854	348	1,323	167
Other engineers	1,386	894	492	1,631	468
Physical scientists, total	7,222	5,538	1,679	8,249	1,515
Astronomers	84	46	38	151	46
Chemists	4,030	3,079	948	4,522	687
Physicists	2,471	2,009	466	2,958	629
Other physical scientists	656	425	230	618	154
Environmental scientists, total	1,420	1,075	344	1,631	323
Atmospheric scientists	104	76	28	108	46
Earth scientists	972	746	225	1,146	156
Oceanographers	125	98	27	144	66
Other environmental scientists	229	163	66	233	56
Mathematical/computer scientists, total	9,250	5,728	3,508	9,872	502
Mathematicians	7,429	4,696	2,724	7,817	303
Computer scientists	1,939	1,084	850	2,055	199
Life scientists, total	19,101	14,595	4,472	23,640	6,137
Agricultural scientists	1,474	1,186	282	2,615	558
Biological scientists	8,541	6,862	1,678	10,294	2,605
Medical scientists	9,160	6,713	2,447	10,246	2,788
Other life scientists	674	529	122	1,092	186
Psychologists, total	6,060	3,764	2,292	5,893	364
Social scientists, total	12,154	8,024	4,123	13,135	802
Economists	2,973	1,833	1,139	3,125	250
Political scientists	2,660	1,946	739	2,992	138
Sociologists	3,679	2,330	1,363	3,858	173
Other social scientists	2,909	2,008	898	3,144	241

[1]Full-time equivalents.

SOURCE: National Science Foundation

the method

The survey questionnaires were mailed in February 1981. The following items were contained in the packet sent to survey respondents at each of the institutions: Two copies of the survey form with instructions, one form to complete and submit to NSF, and one for the institution's own files; an envelope in which to return one completed form; a postcard for acknowledgment of receipt of materials and the identity and correct address of the person completing the form; and a cover letter describing

Table A-3. Science/engineering personnel survey imputed and estimated amounts by field: January 1981

Disciplines	All scientific/engineering employment			Full-time equivalents devoted to R&D activities		
	Total	Amount imputed and/or estimated	Percent of total	Total	Amount imputed and/or estimated	Percent of total
Total	333,408	62,368	18.7%	57,162	10,938	19.1
Engineers	34,789	5,329	15.3	6,782	1,196	17.6
Physical scientists	34,059	7,222	21.2	7,132	1,515	21.2
Environmental scientists	10,026	1,420	14.2	2,882	323	11.2
Mathematical/computer scientists	38,900	9,250	23.8	2,114	502	23.7
Life scientists	137,238	19,101	13.9	32,857	6,137	18.7
Psychologists	23,341	6,060	26.0	1,604	364	22.7
Social scientists	55,055	12,154	22.1	3,791	802	21.2

SOURCE: National Science Foundation

the survey. In addition, a telephone number of the NSF personnel handling the survey was included on the form. As a rule, information to complete this instrument is found within the institution's central records which are compiled in the fall of each year.

It should be evident that, as in all surveys, the quality of the data collected depends on the respondents' ability to provide the data easily. If information is not available by the time of the survey closeout, the respondent may find it necessary to provide only what is readily obtainable. In that case, revision of earlier years' data is a strengthening action.

Institutions that are included in the Personnel survey are given the opportunity to correct prior years' data when necessary. When updated or amended figures covering past years' records are submitted by a respondent, trend data are correspondingly changed by NSF. Similarly, if a respondent institution undergoes an organizational change such as a merger, NSF incorporates such changes into the prior-year data so as to preserve the comparability and consistency of the data series.

Every effort is made to maintain close contact with respondents to preserve the consistency and continuity of the resultant data. The completed 1981 questionnaires were carefully examined upon receipt by NSF. A computerized facsimile of the survey form was then prepared for each institution, depicting a 2-year comparison of its responses including the current-year's data, and noting substantive disparities, if any. The fascimiles were mailed to all doctorate-granting institutions and to all other institutions whose data required corrections so that updating could be accomplished before the final processing and tabulation by the contractor.

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FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1980	1981
TOTAL	268,495	278,919	288,227	297,754	307,622	324,066	333,408
ENGINEERS	27,198	27,919	28,495	30,091	30,997	33,747	34,789
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,191	1,094	1,133	1,144	1,132	1,407	1,263
CHEMICAL ENGINEERS	1,732	1,864	1,861	1,924	1,999	2,352	2,285
CIVIL ENGINEERS	4,561	4,877	5,032	5,162	5,366	5,530	5,688
ELECTRICAL ENGINEERS	6,481	6,767	6,932	6,931	7,199	8,156	8,557
MECHANICAL ENGINEERS	4,964	5,298	5,302	5,492	5,651	6,078	6,322
OTHER ENGINEERS	8,269	8,019	8,235	9,438	9,650	10,224	10,674
PHYSICAL SCIENTISTS	30,605	30,836	31,421	32,118	32,836	33,553	34,059
ASTRONOMERS 2/	-	-	-	-	-	953	1,062
CHEMISTS	16,078	16,150	16,584	17,125	17,665	17,611	18,080
PHYSICISTS	12,138	12,323	12,198	12,486	12,774	13,008	12,910
OTHER PHYSICAL SCIENTISTS	2,389	2,363	2,639	2,507	2,397	1,981	2,007
ENVIRONMENTAL SCIENTISTS	7,636	7,855	8,456	9,221	9,498	9,819	10,026
ATMOSPHERIC SCIENTISTS	677	682	719	785	962	943	918
EARTH SCIENTISTS	5,764	5,998	6,494	6,946	6,987	6,573	6,626
OCEANOGRAPHERS	1,195	1,175	1,243	1,490	1,549	1,539	1,606
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	-	-	764	876
MATHEMATICAL AND COMPUTER SCIENTISTS	27,126	28,475	29,913	31,996	33,030	35,964	38,900
MATHEMATICIANS	22,271	23,368	24,133	25,440	25,991	27,087	28,536
COMPUTER SCIENTISTS	4,855	5,107	5,780	6,556	7,039	8,877	10,364
LIFE SCIENTISTS	110,445	113,466	114,591	117,444	122,956	133,640	137,238
AGRICULTURAL SCIENTISTS	13,308	14,287	14,182	14,362	15,020	15,888	15,894
BIOLOGICAL SCIENTISTS	35,686	38,173	40,030	42,622	43,600	44,809	46,292
MEDICAL SCIENTISTS	61,451	61,006	60,379	60,460	64,336	67,119	68,534
OTHER LIFE SCIENTISTS 2/	-	-	-	-	-	5,824	6,518
PSYCHOLOGISTS	19,964	21,649	22,940	23,705	23,753	23,257	23,341
SOCIAL SCIENTISTS	45,521	48,719	52,411	53,179	54,552	54,086	55,055
ECONOMISTS	12,049	12,655	13,132	13,866	14,087	14,683	15,034
POLITICAL SCIENTISTS	10,007	10,553	11,342	11,220	11,352	11,194	11,560
SOCIOLOGISTS	13,016	14,234	15,181	15,535	15,406	14,500	14,635
OTHER SOCIAL SCIENTISTS	10,449	11,277	12,756	12,558	13,707	13,709	13,826

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-2. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981 1/

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1980	1981
TOTAL	218,407	223,336	229,812	236,195	242,059	254,861	258,849
ENGINEERS	22,764	22,580	22,924	24,113	24,666	26,478	26,992
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,023	944	966	968	964	1,144	1,058
CHEMICAL ENGINEERS	1,522	1,603	1,638	1,684	1,725	1,886	1,901
CIVIL ENGINEERS	3,759	3,832	4,015	4,112	4,240	4,326	4,428
ELECTRICAL ENGINEERS	5,404	5,393	5,405	5,465	5,593	6,374	6,502
MECHANICAL ENGINEERS	4,255	4,355	4,346	4,469	4,532	4,820	4,931
OTHER ENGINEERS	6,801	6,453	6,554	7,415	7,612	7,928	8,172
PHYSICAL SCIENTISTS	26,849	26,662	27,080	27,552	27,897	27,994	28,173
ASTRONOMERS 2/	-	-	-	-	-	816	897
CHEMISTS	14,075	13,823	14,143	14,476	14,737	14,328	14,755
PHYSICISTS	10,870	10,940	10,822	11,060	11,248	11,326	11,014
OTHER PHYSICAL SCIENTISTS	1,904	1,899	2,115	2,016	1,912	1,524	1,507
ENVIRONMENTAL SCIENTISTS	6,563	6,787	7,257	7,972	8,181	8,336	8,551
ATMOSPHERIC SCIENTISTS	571	559	601	692	821	793	763
EARTH SCIENTISTS	4,957	5,172	5,527	5,915	5,963	5,556	5,632
OCEANOGRAPHERS	1,035	1,056	1,129	1,365	1,397	1,386	1,465
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	-	-	601	691
MATHEMATICAL AND COMPUTER SCIENTISTS	22,157	22,404	23,125	23,871	24,346	26,036	27,091
MATHEMATICIANS	18,490	18,699	18,992	19,289	19,563	19,922	20,224
COMPUTER SCIENTISTS	3,667	3,705	4,133	4,582	4,783	6,114	6,867
LIFE SCIENTISTS	88,497	90,684	91,869	94,312	97,730	108,114	110,059
AGRICULTURAL SCIENTISTS	12,459	13,235	12,942	13,064	13,702	14,432	14,354
BIOLOGICAL SCIENTISTS	31,494	33,462	34,899	36,883	37,668	38,725	39,866
MEDICAL SCIENTISTS	44,544	43,987	44,028	44,365	46,360	50,316	50,707
OTHER LIFE SCIENTISTS 2/	-	-	-	-	-	4,641	5,132
PSYCHOLOGISTS	14,957	15,973	16,802	17,312	17,407	16,751	16,820
SOCIAL SCIENTISTS	36,620	38,246	40,755	41,063	41,832	41,152	41,163
ECONOMISTS	9,830	10,169	10,369	10,697	10,855	11,101	11,201
POLITICAL SCIENTISTS	8,396	8,687	9,065	9,009	9,055	8,768	8,992
SOCIOLOGISTS	10,048	10,744	11,427	11,671	11,503	10,857	10,706
OTHER SOCIAL SCIENTISTS	8,346	8,646	9,894	9,686	10,419	10,426	10,264

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-3. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981 1/

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1980	1981
TOTAL	50,088	55,583	58,415	61,559	65,563	69,205	74,559
ENGINEERS	4,434	5,339	5,571	5,978	6,331	7,269	7,797
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	168	150	167	176	168	263	205
CHEMICAL ENGINEERS	210	261	223	240	274	466	384
CIVIL ENGINEERS	802	1,045	1,017	1,050	1,126	1,204	1,260
ELECTRICAL ENGINEERS	1,077	1,374	1,527	1,466	1,606	1,782	2,055
MECHANICAL ENGINEERS	709	943	956	1,023	1,119	1,258	1,391
OTHER ENGINEERS	1,468	1,566	1,681	2,023	2,038	2,296	2,502
PHYSICAL SCIENTISTS	3,756	4,174	4,341	4,566	4,939	5,559	5,886
ASTRONOMERS 2/	-	-	-	-	-	137	165
CHEMISTS	2,003	2,327	2,441	2,649	2,928	3,283	3,325
PHYSICISTS	1,268	1,383	1,376	1,426	1,526	1,682	1,896
OTHER PHYSICAL SCIENTISTS	485	464	524	491	485	457	500
ENVIRONMENTAL SCIENTISTS	1,073	1,068	1,199	1,249	1,317	1,483	1,475
ATMOSPHERIC SCIENTISTS	106	123	118	93	141	150	155
EARTH SCIENTISTS	807	826	967	1,031	1,024	1,017	994
OCEANOGRAPHERS	160	119	114	125	152	153	141
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	-	-	163	185
MATHEMATICAL AND COMPUTER SCIENTISTS	4,969	6,071	6,788	8,125	8,684	9,928	11,809
MATHEMATICIANS	3,781	4,669	5,141	6,151	6,428	7,165	8,312
COMPUTER SCIENTISTS	1,188	1,402	1,647	1,974	2,256	2,763	3,497
LIFE SCIENTISTS	21,948	22,782	22,722	23,132	25,226	25,526	27,179
AGRICULTURAL SCIENTISTS	849	1,052	1,240	1,298	1,318	1,456	1,540
BIOLOGICAL SCIENTISTS	4,192	4,711	5,131	5,739	5,932	6,084	6,426
MEDICAL SCIENTISTS	16,907	17,019	16,351	16,095	17,976	16,803	17,827
OTHER LIFE SCIENTISTS 2/	-	-	-	-	-	1,183	1,386
PSYCHOLOGISTS	5,007	5,676	6,138	6,393	6,346	6,506	6,521
SOCIAL SCIENTISTS	8,901	10,473	11,656	12,116	12,720	12,934	13,892
ECONOMISTS	2,219	2,486	2,763	3,169	3,232	3,582	3,833
POLITICAL SCIENTISTS	1,611	1,866	2,277	2,211	2,297	2,426	2,568
SOCIOLOGISTS	2,968	3,490	3,754	3,864	3,903	3,643	3,929
OTHER SOCIAL SCIENTISTS	2,103	2,631	2,862	2,872	3,288	3,283	3,562

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-4. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1979	1980	1981
TOTAL	175,113	180,001	185,908	192,790	199,900	210,441	217,511	222,985
ENGINEERS	19,774	19,541	19,968	21,186	21,735	23,528	24,476	24,988
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	980	889	868	871	830	893	1,113	961
CHEMICAL ENGINEERS	1,485	1,592	1,613	1,711	1,751	1,890	2,070	1,959
CIVIL ENGINEERS	3,299	3,290	3,430	3,518	3,630	3,715	3,796	3,828
ELECTRICAL ENGINEERS	4,346	4,243	4,305	4,317	4,545	5,115	5,479	5,629
MECHANICAL ENGINEERS	3,202	3,322	3,445	3,551	3,620	3,827	4,001	4,153
OTHER ENGINEERS	6,462	6,205	6,307	7,218	7,359	8,088	8,017	8,458
PHYSICAL SCIENTISTS	16,999	16,619	17,254	17,746	18,240	18,797	19,194	19,476
ASTRONOMERS 1/	-	-	-	-	-	783	735	798
CHEMISTS	8,437	8,071	8,446	8,720	9,108	9,084	9,200	9,610
PHYSICISTS	7,091	7,109	7,142	7,437	7,650	7,801	7,976	7,786
OTHER PHYSICAL SCIENTISTS	1,471	1,439	1,666	1,589	1,482	1,129	1,283	1,282
ENVIRONMENTAL SCIENTISTS	4,778	4,908	5,305	6,075	6,364	6,499	6,733	6,921
ATMOSPHERIC SCIENTISTS	534	539	574	671	800	784	804	768
EARTH SCIENTISTS	3,281	3,386	3,671	4,097	4,217	3,893	4,074	4,221
OCEANOGRAPHERS	963	983	1,060	1,307	1,347	1,543	1,362	1,436
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	-	-	279	493	496
MATHEMATICAL AND COMPUTER SCIENTISTS	11,373	11,567	12,197	12,899	13,454	14,469	15,587	16,520
MATHEMATICIANS	8,796	9,011	9,344	9,842	10,195	10,534	11,035	11,437
COMPUTER SCIENTISTS	2,577	2,556	2,853	3,057	3,259	3,935	4,552	5,083
LIFE SCIENTISTS	91,112	94,806	96,377	98,854	102,781	108,984	113,538	116,284
AGRICULTURAL SCIENTISTS	11,486	12,282	12,198	12,079	12,579	13,258	13,498	13,496
BIOLOGICAL SCIENTISTS	23,367	25,382	26,782	28,867	29,464	30,911	31,340	32,866
MEDICAL SCIENTISTS	56,259	57,142	57,397	57,908	60,738	61,586	64,182	65,266
OTHER LIFE SCIENTISTS 1/	-	-	-	-	-	3,229	4,518	4,656
PSYCHOLOGISTS	8,785	9,222	9,608	9,777	9,953	10,041	10,182	10,396
SOCIAL SCIENTISTS	22,292	23,338	25,199	26,253	27,373	28,123	27,801	28,400
ECONOMISTS	6,418	6,526	6,825	7,288	7,589	7,982	8,087	8,190
POLITICAL SCIENTISTS	4,592	4,758	5,126	5,186	5,303	5,503	5,372	5,595
SOCIOLOGISTS	5,211	5,709	6,288	6,569	6,570	6,628	6,308	6,607
OTHER SOCIAL SCIENTISTS	6,071	6,345	6,960	7,210	7,911	8,010	8,034	8,008

1/ DATA NOT AVAILABLE PRIOR TO 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-5. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1979	1980	1981
TOTAL	144,525	147,942	153,708	159,578	164,441	173,072	179,475	182,464
ENGINEERS	17,002	16,592	16,962	17,954	18,428	19,932	20,468	20,862
AERO. AUTICAL AND ASTRONAUTICAL ENGINEERS	867	792	778	778	748	778	945	846
CHEMICAL ENGINEERS	1,323	1,390	1,437	1,503	1,540	1,611	1,690	1,683
CIVIL ENGINEERS	2,797	2,727	2,880	2,967	3,079	3,122	3,176	3,227
ELECTRICAL ENGINEERS	3,730	3,575	3,610	3,696	3,847	4,387	4,671	4,731
MECHANICAL ENGINEERS	2,833	2,914	2,982	3,072	3,104	3,277	3,409	3,504
OTHER ENGINEERS	5,452	5,195	5,275	5,938	6,110	6,757	6,577	6,871
PHYSICAL SCIENTISTS	15,167	14,796	15,456	15,918	16,223	16,413	16,749	16,937
ASTRONOMERS 1/	-	-	-	-	-	712	685	735
CHEMISTS	7,455	7,038	7,433	7,701	7,948	7,749	7,761	8,241
PHYSICISTS	6,472	6,497	6,546	6,803	6,974	7,076	7,265	6,952
OTHER PHYSICAL SCIENTISTS	1,240	1,261	1,477	1,414	1,301	876	1,038	1,009
ENVIRONMENTAL SCIENTISTS	4,277	4,377	4,762	5,482	5,716	5,773	5,913	6,136
ATMOSPHERIC SCIENTISTS	467	459	509	608	712	693	701	669
EARTH SCIENTISTS	2,938	3,022	3,263	3,653	3,754	3,476	3,562	3,731
OCEANOGRAPHERS	872	896	990	1,221	1,250	1,428	1,257	1,337
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	-	-	176	393	399
MATHEMATICAL AND COMPUTER SCIENTISTS	9,838	9,818	10,449	10,847	11,162	11,970	12,794	13,379
MATHEMATICIANS	7,752	7,811	8,148	8,410	8,594	8,896	9,135	9,368
COMPUTER SCIENTISTS	2,086	2,007	2,301	2,437	2,568	3,074	3,659	4,011
LIFE SCIENTISTS	72,770	75,685	77,331	79,715	82,252	87,936	92,693	94,175
AGRICULTURAL SCIENTISTS	10,882	11,522	11,405	11,315	11,830	12,335	12,549	12,458
BIOLOGICAL SCIENTISTS	20,965	22,760	23,965	25,780	26,427	27,532	28,133	29,353
MEDICAL SCIENTISTS	40,923	41,403	41,961	42,620	43,995	45,484	48,411	48,647
OTHER LIFE SCIENTISTS 1/	-	-	-	-	-	2,584	3,600	3,717
PSYCHOLOGISTS	6,758	7,157	7,550	7,847	7,986	7,971	8,042	8,192
SOCIAL SCIENTISTS	18,713	19,516	21,198	21,815	22,674	23,077	22,816	22,783
ECONOMISTS	5,486	5,647	5,929	6,152	6,374	6,619	6,687	6,676
POLITICAL SCIENTISTS	3,916	4,039	4,296	4,285	4,410	4,456	4,350	4,566
SOCIOLOGISTS	4,276	4,650	5,195	5,411	5,418	5,457	5,189	5,184
OTHER SOCIAL SCIENTISTS	5,035	5,180	5,778	5,967	6,472	6,545	6,590	6,357

1/ DATA NOT AVAILABLE PRIOR TO 1979
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1979	1980	1981
TOTAL	30,588	32,059	32,200	33,212	35,459	37,369	38,036	40,521
ENGINEERS	2,772	2,948	3,006	3,232	3,307	3,596	4,008	4,126
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	113	97	90	93	82	115	168	115
CHEMICAL ENGINEERS	162	202	176	208	211	279	380	276
CIVIL ENGINEERS	502	563	550	551	551	593	620	601
ELECTRICAL ENGINEERS	616	668	695	621	698	728	808	898
MECHANICAL ENGINEERS	369	408	463	479	516	550	592	649
OTHER ENGINEERS	1,010	1,010	1,032	1,280	1,249	1,331	1,440	1,587
PHYSICAL SCIENTISTS	1,832	1,823	1,798	1,828	2,017	2,384	2,445	2,539
ASTRONOMERS 1/	-	-	-	-	-	71	50	63
CHEMISTS	982	1,033	1,013	1,019	1,160	1,335	1,439	1,369
PHYSICISTS	619	612	596	634	676	725	711	834
OTHER PHYSICAL SCIENTISTS	231	178	189	175	181	253	245	273
ENVIRONMENTAL SCIENTISTS	501	531	543	593	648	726	820	785
ATMOSPHERIC SCIENTISTS	67	80	65	63	88	91	103	99
EARTH SCIENTISTS	343	364	408	444	463	417	512	490
OCEANOGRAPHERS	91	87	70	86	97	115	105	99
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	-	-	-	-	103	100	97
MATHEMATICAL AND COMPUTER SCIENTISTS	1,535	1,749	1,748	2,052	2,292	2,499	2,793	3,141
MATHEMATICIANS	1,044	1,200	1,196	1,432	1,601	1,638	1,900	2,069
COMPUTER SCIENTISTS	491	549	552	620	691	861	893	1,072
LIFE SCIENTISTS	18,342	19,121	19,046	19,139	20,529	21,048	20,845	22,109
AGRICULTURAL SCIENTISTS	604	760	793	764	749	923	949	1,038
BIOLOGICAL SCIENTISTS	2,402	2,622	2,817	3,087	3,037	3,378	3,207	3,513
MEDICAL SCIENTISTS	15,336	15,739	15,436	15,288	16,743	16,102	15,771	16,619
OTHER LIFE SCIENTISTS 1/	-	-	-	-	-	645	918	939
PSYCHOLOGISTS	2,027	2,065	2,058	1,930	1,967	2,070	2,140	2,204
SOCIAL SCIENTISTS	3,579	3,822	4,001	4,438	4 699	5,046	4,985	5,617
ECONOMISTS	932	879	896	1,136	1,215	1,363	1,400	1,514
POLITICAL SCIENTISTS	676	719	830	901	893	1,047	1,022	1,029
SOCIOLOGISTS	935	1,059	1,093	1,158	1,152	1,171	1,119	1,423
OTHER SOCIAL SCIENTISTS	1,036	1,165	1,182	1,243	1,439	1,465	1,444	1,651

1/ DATA NOT AVAILABLE PRIOR TO 1979
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-7. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND STATUS: JANUARY 1967 - JANUARY 1981 1/

FIELD OF EMPLOYMENT AND STATUS	1967	1969	1971	1973	1974	1975	1976	1977	1978	1980	1981
ALL FIELDS	212,855	231,756	257,904	264,887	268,495	278,919	288,227	297,754	307,622	324,066	333,408
FULL TIME	170,557	187,082	209,416	216,424	218,407	223,336	229,812	236,195	242,059	254,861	258,849
PART TIME	42,298	44,674	48,488	48,463	50,088	55,583	58,415	61,559	65,563	69,205	74,559
ENGINEERS	25,253	25,387	27,130	27,530	27,198	27,919	28,495	30,091	30,997	33,747	34,789
FULL TIME	20,983	21,431	23,039	23,485	22,764	22,580	22,924	24,113	24,666	26,478	26,992
PART TIME	4,270	3,956	4,091	4,045	4,434	5,339	5,571	5,978	6,331	7,269	7,797
PHYSICAL SCIENTISTS	26,243	28,149	29,443	30,210	30,605	30,836	31,421	32,118	32,836	33,553	34,059
FULL TIME	23,361	25,040	26,346	26,666	26,849	26,662	27,080	27,552	27,897	27,994	28,173
PART TIME	2,882	3,109	3,097	3,544	3,756	4,174	4,341	4,566	4,939	5,559	5,886
ENVIRONMENTAL SCIENTISTS	5,111	5,549	6,500	6,934	7,636	7,855	8,456	9,221	9,498	9,819	10,026
FULL TIME	4,294	4,935	5,752	6,091	6,563	6,787	7,257	7,972	8,181	8,336	8,551
PART TIME	817	614	748	843	1,073	1,068	1,199	1,249	1,317	1,483	1,475
MATHEMATICAL AND COMPUTER SCIENTISTS	17,776	22,495	24,548	24,770	27,126	28,475	29,913	31,996	33,030	35,964	38,900
FULL TIME	14,397	18,390	20,282	20,794	22,157	22,404	23,125	23,871	24,346	26,036	27,091
PART TIME	3,379	4,105	4,266	3,976	4,969	6,071	6,788	8,125	8,684	9,928	11,809
LIFE SCIENTISTS	87,347	97,206	110,274	112,352	110,445	113,466	114,591	117,444	122,956	133,640	137,238
FULL TIME	66,620	74,882	85,907	88,418	88,497	90,684	91,869	94,312	97,730	108,114	110,059
PART TIME	20,727	22,324	24,367	23,934	21,948	22,782	22,722	23,132	25,226	25,526	27,179
PSYCHOLOGISTS	11,358	14,780	16,806	18,876	19,964	21,649	22,940	23,705	23,753	23,257	23,341
FULL TIME	8,554	11,536	12,994	14,777	14,957	15,973	16,802	17,312	17,407	16,751	16,820
PART TIME	2,804	3,244	3,812	4,099	5,007	5,676	6,138	6,393	6,346	6,506	6,521
SOCIAL SCIENTISTS	39,767	38,190	43,203	44,215	45,521	48,719	52,411	53,179	54,552	54,086	55,055
FULL TIME	32,348	30,868	35,096	36,193	36,620	38,246	40,755	41,063	41,832	41,152	41,163
PART TIME	7,419	7,322	8,107	8,022	8,901	10,473	11,656	12,116	12,720	12,934	13,892

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-8. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY TYPE OF INSTITUTION AND STATUS: JANUARY 1967 - JANUARY 1981 1/

TYPE OF INSTITUTION AND STATUS	1967	1969	1971	1973	1974	1975	1976	1977	1978	1980	1981
ALL INSTITUTIONS	212,855	231,756	257,904	264,887	268,495	278,919	288,227	297,754	307,622	324,066	333,408
FULL TIME	170,557	187,082	209,416	216,424	218,407	223,336	229,812	236,195	242,059	254,861	258,849
PART TIME	42,298	44,674	48,488	48,463	50,088	55,583	58,415	61,559	65,563	69,205	74,559
INSTITUTIONS GRANTING:											
DOCTORATE IN S&E	142,676	154,424	171,238	174,474	175,113	180,001	185,908	192,790	199,900	217,511	222,985
FULL TIME	114,446	124,604	140,339	143,393	144,525	147,942	153,708	159,578	164,441	179,475	182,464
PART TIME	28,230	29,820	30,899	31,081	30,588	32,059	32,200	33,212	35,459	38,036	40,521
MASTER'S IN S&E	24,729	29,441	30,080	28,703	29,765	34,075	33,143	34,790	38,762	37,496	37,655
FULL TIME	20,748	25,212	25,597	24,851	24,957	27,511	26,307	27,118	29,477	27,995	27,850
PART TIME	3,981	4,229	4,483	3,852	4,808	6,564	6,836	7,672	9,285	9,501	9,805
BACHELOR'S IN S&E	23,025	21,690	23,138	28,363	29,143	27,402	27,862	27,701	26,390	26,967	27,639
FULL TIME	19,328	17,927	19,623	23,620	23,940	22,548	22,867	22,615	21,253	20,859	21,234
PART TIME	3,697	3,763	3,575	4,743	5,203	4,854	4,995	5,086	5,137	6,108	6,405
NONSCIENCE DEGREES 2/	22,425	26,201	33,388	1,348	1,322	1,345	1,033	607	858	842	916
FULL TIME	16,035	19,339	23,857	812	851	828	598	467	705	680	708
PART TIME	6,390	6,862	9,531	536	471	517	435	140	153	162	208
2-YEAR INSTITUTIONS	-	-	-	31,999	33,152	36,096	40,281	41,866	41,712	41,250	44,213
FULL TIME	-	-	-	23,748	24,134	24,507	26,332	26,417	26,183	25,852	26,593
PART TIME	-	-	-	8,251	9,018	11,589	13,949	15,449	15,529	15,398	17,620

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA FOR 1967 THROUGH 1971 INCLUDE 2-YEAR INSTITUTIONS AS WELL AS INSTITUTIONS AWARDING DEGREES IN NONSCIENCE FIELDS.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-9. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY CONTROL AND LEVEL OF ATTAINMENT: JANUARY 1976 - JANUARY 1981 1/

CONTROL AND LEVEL OF ATTAINMENT	1976	1977	1978	1980	1981	PERCENT CHANGE 1980-81
ALL INSTITUTIONS						
TOTAL	229,812	236,195	242,059	254,861	258,849	1.6%
DOCTOR'S	129,852	134,632	138,933	143,405	145,748	1.6
FIRST PROFESSIONAL	30,099	30,834	31,633	34,321	34,288	-.1
MASTER'S	53,710	54,076	54,531	56,697	56,877	.3
BACHELOR'S	16,151	16,653	16,962	20,438	21,936	7.3
PUBLIC INSTITUTIONS						
TOTAL	161,744	166,427	169,285	178,057	180,771	1.5
DOCTOR'S	90,083	93,327	95,878	98,988	100,663	1.7
FIRST PROFESSIONAL	16,248	16,562	16,425	17,412	17,409	.0
MASTER'S	42,778	43,388	43,816	45,791	45,738	.0
BACHELOR'S	12,635	13,150	13,166	15,906	16,961	6.6
PRIVATE INSTITUTIONS						
TOTAL	68,068	69,768	72,774	76,804	78,078	1.7
DOCTOR'S	39,769	41,305	43,055	44,417	45,085	1.5
FIRST PROFESSIONAL	13,851	14,272	15,208	16,909	16,879	-.2
MASTER'S	10,932	10,688	10,715	10,946	11,139	1.8
BACHELOR'S	3,516	3,503	3,796	4,532	4,975	9.8

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-10. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY CONTROL AND LEVEL OF ATTAINMENT: JANUARY 1976 - JANUARY 1981 1/

CONTROL AND LEVEL OF ATTAINMENT	1976	1977	1978	1980	1981	PERCENT CHANGE 1980-81
ALL INSTITUTIONS						
TOTAL	58,415	61,559	65,563	69,205	74,559	7.7%
DOCTOR'S	14,954	15,560	16,986	18,190	18,794	3.3
FIRST PROFESSIONAL	14,202	13,688	15,101	14,306	15,563	8.8
MASTER'S	21,714	23,905	24,659	26,732	29,159	9.1
BACHELOR'S	7,545	8,406	8,817	9,977	11,043	10.7
PUBLIC INSTITUTIONS						
TOTAL	36,818	39,369	41,535	45,843	49,209	7.3
DOCTOR'S	8,576	8,967	9,826	11,149	11,294	1.3
FIRST PROFESSIONAL	6,693	6,707	7,296	7,672	7,982	4.0
MASTER'S	15,539	17,018	17,424	18,772	20,833	11.0
BACHELOR'S	6,010	6,677	6,987	8,250	9,100	10.3
PRIVATE INSTITUTIONS						
TOTAL	21,597	22,190	24,028	23,362	25,350	8.5
DOCTOR'S	6,378	6,593	7,160	7,041	7,500	6.5
FIRST PROFESSIONAL	7,509	6,981	7,805	6,634	7,581	14.3
MASTER'S	6,175	6,887	7,233	7,960	8,326	4.6
BACHELOR'S	1,535	1,729	1,830	1,727	1,943	12.5

1/ DATA WERE NOT COLLECTED IN 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-11. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND SEX: JANUARY 1976 - JANUARY 1981

FIELD OF EMPLOYMENT	MEN				WOMEN			
	1976	1980	1981	PERCENT CHANGE 1980-81	1976	1980	1981	PERCENT CHANGE 1980-81
TOTAL	194,300	210,697	212,510	0.9%	35,512	44,164	46,339	4.9%
ENGINEERS	22,475	25,765	26,190	1.6	449	713	802	12.5
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	936	1,117	1,036	-7.3	30	27	22	-18.5
CHEMICAL ENGINEERS	1,601	1,827	1,833	.3	37	59	68	15.3
CIVIL ENGINEERS	3,932	4,208	4,295	2.1	83	118	133	12.7
ELECTRICAL ENGINEERS	5,331	6,260	6,378	1.9	74	114	124	8.8
MECHANICAL ENGINEERS	4,301	4,728	4,820	1.9	45	92	111	20.7
OTHER ENGINEERS	6,374	7,625	7,828	2.7	180	303	344	13.5
PHYSICAL SCIENTISTS	24,976	25,507	25,560	.2	2,104	2,487	2,613	5.1
ASTRONOMERS 1/	-	748	818	9.4	-	68	79	16.2
CHEMISTS	12,634	12,553	12,867	2.5	1,509	1,775	1,888	6.4
PHYSICISTS	10,428	10,834	10,524	-2.9	394	492	490	-.4
OTHER PHYSICAL SCIENTISTS	1,914	1,372	1,351	-1.5	201	152	156	2.6
ENVIRONMENTAL SCIENTISTS	6,867	7,576	7,809	1.7	390	660	742	12.4
ATMOSPHERIC SCIENTISTS	568	749	713	-4.8	33	44	50	13.6
EARTH SCIENTISTS	5,240	5,158	5,209	1.0	287	398	423	6.3
OCEANOGRAPHERS	1,059	1,259	1,304	3.6	70	127	161	26.8
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	510	583	14.3	-	91	108	18.7
MATHEMATICAL AND COMPUTER SCIENTISTS	20,021	21,946	22,668	3.3	3,104	4,090	4,423	8.1
MATHEMATICIANS	16,370	16,741	16,914	1.0	2,622	3,181	3,310	4.1
COMPUTER SCIENTISTS	3,651	5,205	5,754	10.5	482	909	1,113	22.4
LIFE SCIENTISTS	73,580	84,049	84,504	.5	18,289	24,065	25,555	6.2
AGRICULTURAL SCIENTISTS	11,777	13,107	13,009	-.7	1,165	1,325	1,345	1.5
BIOLOGICAL SCIENTISTS	27,870	30,506	31,186	2.2	7,029	8,219	8,680	5.6
MEDICAL SCIENTISTS	33,933	38,599	38,308	-.8	10,095	11,717	12,399	5.8
OTHER LIFE SCIENTISTS 1/	-	1,837	2,001	8.9	-	2,804	3,131	11.7
PSYCHOLOGISTS	12,813	12,429	12,428	.0	3,989	4,322	4,392	1.6
SOCIAL SCIENTISTS	33,568	33,325	33,351	.1	7,187	7,827	7,812	-.2
ECONOMISTS	9,436	9,990	10,075	.9	933	1,111	1,126	1.4
POLITICAL SCIENTISTS	8,036	7,653	7,825	2.2	1,029	1,115	1,167	4.7
SOCIOLOGISTS	8,501	7,919	7,768	-1.9	2,926	2,938	2,938	.0
OTHER SOCIAL SCIENTISTS	7,595	7,763	7,683	-1.0	2,299	2,663	2,581	-3.1

1/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-12. — MALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981 1/

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1980	1981
TOTAL	186,283	189,723	194,300	199,361	203,128	210,697	212,510
ENGINEERS	22,425	22,211	22,475	23,607	24,068	25,765	26,190
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,001	919	936	94[illegible]	946	1,117	1,036
CHEMICAL ENGINEERS	1,500	1,578	1,601	1,6[illegible]4	1,692	1,827	1,833
CIVIL ENGINEERS	3,698	3,771	3,932	4,[illegible]23	4,112	4,208	4,295
ELECTRICAL ENGINEERS	5,347	5,336	5,331	[illegible]394	5,502	6,260	6,378
MECHANICAL ENGINEERS	4,222	4,325	4,301	4,410	4,471	4,728	4,820
OTHER ENGINEERS	6,657	6,282	6,374	7,190	7,345	7,625	7,828
PHYSICAL SCIENTISTS	24,910	24,665	24,976	25,344	25,449	25,507	25,560
ASTRONOMERS 2/	-	-	-	-	-	748	818
CHEMISTS	12,490	12,395	12,634	12,912	13,012	12,553	12,867
PHYSICISTS	10,475	10,554	10,428	10,623	10,769	10,834	10,524
OTHER PHYSICAL SCIENTISTS	1,745	1,716	1,914	1,809	1,668	1,372	1,351
ENVIRONMENTAL SCIENTISTS	6,236	6,468	6,867	7,460	7,611	7,676	7,809
ATMOSPHERIC SCIENTISTS	532	525	568	654	786	749	713
EARTH SCIENTISTS	4,728	4,949	5,240	5,566	5,551	5,158	5,209
OCEANOGRAPHERS	976	994	1,059	1,240	1,274	1,259	1,304
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	-	-	510	583
MATHEMATICAL AND COMPUTER SCIENTISTS	19,335	19,479	20,021	20,614	20,874	21,946	22,668
MATHEMATICIANS	16,053	16,220	16,370	16,569	16,651	16,741	16,914
COMPUTER SCIENTISTS	3,282	3,259	3,651	4,045	4,223	5,205	5,754
LIFE SCIENTISTS	70,756	72,639	73,580	75,601	77,782	84,049	84,504
AGRICULTURAL SCIENTISTS	11,235	11,685	11,777	11,953	12,463	13,107	13,009
BIOLOGICAL SCIENTISTS	25,823	27,143	27,870	29,320	29,878	30,506	31,186
MEDICAL SCIENTISTS	33,698	33,811	33,933	34,328	35,441	38,599	38,308
OTHER LIFE SCIENTISTS 2/	-	-	-	-	-	1,837	2,001
PSYCHOLOGISTS	11,769	12,391	12,813	13,058	13,092	12,429	12,428
SOCIAL SCIENTISTS	30,852	31,870	33,568	33,677	34,252	33,325	33,351
ECONOMISTS	9,042	9,304	9,436	9,741	9,887	9,990	10,075
POLITICAL SCIENTISTS	7,533	7,788	8,036	7,959	7,974	7,653	7,825
SOCIOLOGISTS	7,672	8,104	8,501	8,629	8,479	7,919	7,768
OTHER SOCIAL SCIENTISTS	6,605	6,674	7,595	7,348	7,912	7,763	7,683

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-13. — FEMALE FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT: JANUARY 1974 - JANUARY 1981 1/

FIELD OF EMPLOYMENT	1974	1975	1976	1977	1978	1980	1981
TOTAL	32,124	33,613	35,512	36,834	38,931	44,164	46,339
ENGINEERS	339	369	449	506	598	713	802
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	22	25	30	22	18	27	22
CHEMICAL ENGINEERS	22	25	37	40	33	59	68
CIVIL ENGINEERS	61	61	83	89	128	118	133
ELECTRICAL ENGINEERS	57	57	74	71	91	114	124
MECHANICAL ENGINEERS	33	30	45	59	61	92	111
OTHER ENGINEERS	144	171	180	225	267	303	344
PHYSICAL SCIENTISTS	1,939	1,997	2,104	2,208	2,448	2,487	2,613
ASTRONOMERS 2/	-	-	-	-	-	68	79
CHEMISTS	1,385	1,428	1,509	1,564	1,725	1,775	1,888
PHYSICISTS	395	386	394	437	479	492	490
OTHER PHYSICAL SCIENTISTS	159	183	201	207	244	152	156
ENVIRONMENTAL SCIENTISTS	327	319	390	512	570	660	742
ATMOSPHERIC SCIENTISTS	39	34	33	38	35	44	50
EARTH SCIENTISTS	229	223	287	349	412	398	423
OCEANOGRAPHERS	59	62	70	125	123	127	161
OTHER ENVIRONMENTAL SCIENTISTS 2/	-	-	-	-	-	91	108
MATHEMATICAL AND COMPUTER SCIENTISTS	2,822	2,925	3,104	3,257	3,472	4,090	4,423
MATHEMATICIANS	2,437	2,479	2,622	2,720	2,912	3,181	3,310
COMPUTER SCIENTISTS	385	446	482	537	560	909	1,113
LIFE SCIENTISTS	17,741	18,045	18,289	18,711	19,948	24,065	25,555
AGRICULTURAL SCIENTISTS	1,224	1,550	1,165	1,111	1,239	1,325	1,345
BIOLOGICAL SCIENTISTS	5,671	6,319	7,029	7,563	7,790	8,279	8,680
MEDICAL SCIENTISTS	10,846	10,176	10,095	10,037	10,919	11,717	12,399
OTHER LIFE SCIENTISTS 2/	-	-	-	-	-	2,804	3,131
PSYCHOLOGISTS	3,188	3,582	3,989	4,254	4,315	4,322	4,392
SOCIAL SCIENTISTS	5,768	6,376	7,187	7,386	7,580	7,827	7,812
ECONOMISTS	788	865	933	956	968	1,111	1,126
POLITICAL SCIENTISTS	863	899	1,029	1,050	1,081	1,115	1,167
SOCIOLOGISTS	2,376	2,640	2,926	3,042	3,024	2,938	2,938
OTHER SOCIAL SCIENTISTS	1,741	1,972	2,299	2,338	2,507	2,663	2,581

1/ DATA WERE NOT COLLECTED IN 1979.
2/ DATA NOT AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-14. — FEMALE SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY TYPE OF EMPLOYMENT: JANUARY 1980 - JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			FULL TIME			PART TIME		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	61,556	65,403	6.2%	44,164	46,339	4.9%	17,392	19,064	9.6%
ENGINEERS	991	1,145	15.5	713	802	12.5	278	343	23.4
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	42	31	-26.2	27	22	-18.5	15	9	-40.0
CHEMICAL ENGINEERS	80	101	26.2	59	68	15.3	21	33	57.1
CIVIL ENGINEERS	155	178	14.8	118	133	12.7	37	45	21.6
ELECTRICAL ENGINEERS	143	172	20.3	114	124	8.8	29	48	65.5
MECHANICAL ENGINEERS	121	159	31.4	92	111	20.7	29	48	65.5
OTHER ENGINEERS	450	504	12.0	303	344	13.5	147	160	8.8
PHYSICAL SCIENTISTS	3,809	3,963	4.0	2,487	2,613	5.1	1,322	1,350	2.1
ASTRONOMERS	88	105	19.3	68	79	16.2	20	26	30.0
CHEMISTS	2,812	2,908	3.4	1,775	1,888	6.4	1,037	1,020	-1.6
PHYSICISTS	652	683	4.8	492	490	-.4	160	193	20.6
OTHER PHYSICAL SCIENTISTS	257	267	3.9	152	156	2.6	105	111	5.7
ENVIRONMENTAL SCIENTISTS	946	1,055	11.5	660	742	12.4	286	313	9.4
ATMOSPHERIC SCIENTISTS	58	70	20.7	44	50	13.6	14	20	42.9
EARTH SCIENTISTS	582	611	5.0	398	423	6.3	184	188	2.2
OCEANOGRAPHERS	167	205	22.8	127	161	26.8	40	44	10.0
OTHER ENVIRONMENTAL SCIENTISTS	139	169	21.6	91	108	18.7	48	61	27.1
MATHEMATICAL AND COMPUTER SCIENTISTS	6,895	7,736	12.2	4,090	4,423	8.1	2,805	3,313	18.1
MATHEMATICIANS	5,619	6,071	8.0	3,181	3,310	4.1	2,438	2,761	13.2
COMPUTER SCIENTISTS	1,276	1,665	30.5	909	1,113	22.4	367	552	50.4
LIFE SCIENTISTS	30,580	32,874	7.5	24,065	25,555	6.2	6,515	7,319	12.3
AGRICULTURAL SCIENTISTS	1,610	1,636	1.6	1,325	1,345	1.5	285	291	2.1
BIOLOGICAL SCIENTISTS	10,504	11,082	5.5	8,219	8,680	5.6	2,285	2,402	5.1
MEDICAL SCIENTISTS	15,035	16,254	8.1	11,717	12,399	5.8	3,318	3,855	16.2
OTHER LIFE SCIENTISTS	3,431	3,902	13.7	2,804	3,131	11.7	627	771	23.0
PSYCHOLOGISTS	6,978	7,001	.3	4,322	4,392	1.6	2,656	2,609	-1.8
SOCIAL SCIENTISTS	11,357	11,629	2.4	7,827	7,812	-.2	3,530	3,817	8.1
ECONOMISTS	1,643	1,659	1.0	1,111	1,126	1.4	532	533	.2
POLITICAL SCIENTISTS	1,608	1,701	5.8	1,115	1,167	4.7	493	534	8.3
SOCIOLOGISTS	4,357	4,509	3.5	2,938	2,938	.0	1,419	1,571	10.7
OTHER SOCIAL SCIENTISTS	3,749	3,760	.3	2,663	2,581	-3.1	1,086	1,179	8.6

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT: JANUARY 1978 - JANUARY 1981

FIELD OF EMPLOYMENT	1978	1979	1980	1981
TOTAL	180,714	186,545	192,573	196,175
ENGINEERS	20,053	21,115	21,826	22,121
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	779	813	1,003	876
CHEMICAL ENGINEERS	1,653	1,714	1,855	1,779
CIVIL ENGINEERS	3,337	3,325	3,380	3,395
ELECTRICAL ENGINEERS	4,139	4,591	4,902	4,986
MECHANICAL ENGINEERS	3,338	3,444	3,598	3,698
OTHER ENGINEERS	6,807	7,228	7,088	7,385
PHYSICAL SCIENTISTS	17,395	17,307	17,695	17,826
ASTRONOMERS 1/	-	705	682	729
CHEMISTS	8,652	8,331	8,363	8,761
PHYSICISTS	7,337	7,355	7,483	7,198
OTHER PHYSICAL SCIENTISTS	1,406	916	1,167	1,137
ENVIRONMENTAL SCIENTISTS	6,095	6,083	6,212	6,358
ATMOSPHERIC SCIENTISTS	768	742	731	691
EARTH SCIENTISTS	4,023	3,642	3,767	3,878
OCEANOGRAPHERS	1,304	1,487	1,281	1,352
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	212	433	437
MATHEMATICAL AND COMPUTER SCIENTISTS	12,148	12,873	13,843	14,515
MATHEMATICIANS	9,318	9,561	9,953	10,182
COMPUTER SCIENTISTS	2,831	3,312	3,891	4,33[illegible]
LIFE SCIENTISTS	91,334	95,774	99,663	101,587
AGRICULTURAL SCIENTISTS	12,299	12,771	12,801	12,918
BIOLOGICAL SCIENTISTS	28,057	28,957	29,291	30,806
MEDICAL SCIENTISTS	50,978	51,256	53,594	53,825
OTHER LIFE SCIENTISTS 1/	-	2,790	3,979	4,037
PSYCHOLOGISTS	8,918	8,594	8,407	8,921
SOCIAL SCIENTISTS	24,771	24,799	24,528	24,847
ECONOMISTS	6,886	7,022	7,127	7,196
POLITICAL SCIENTISTS	4,818	4,847	4,715	4,918
SOCIOLOGISTS	5,953	5,848	5,605	5,821
OTHER SOCIAL SCIENTISTS	7,115	7,082	7,081	6,912

1/ DATA NOT AVAILABLE PRIOR TO 1979.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-16. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT DOCTORATE GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT: JANUARY 1978 - JANUARY 1981

FIELD OF EMPLOYMENT	1978	1979	1980	1981
TOTAL	53,365	54,433	54,735	55,325
ENGINEERS	5,672	6,967	6,874	6,642
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	278	317	387	277
CHEMICAL ENGINEERS	459	522	552	503
CIVIL ENGINEERS	678	716	706	671
ELECTRICAL ENGINEERS	1,261	1,763	1,769	1,730
MECHANICAL ENGINEERS	788	972	915	853
OTHER ENGINEERS	2,208	2,677	2,541	2,609
PHYSICAL SCIENTISTS	6,641	6,647	6,765	6,750
ASTRONOMERS 1/	-	313	362	365
CHEMISTS	3,050	3,025	2,848	3,201
PHYSICISTS	2,669	2,738	2,810	2,474
OTHER PHYSICAL SCIENTISTS	922	573	744	710
ENVIRONMENTAL SCIENTISTS	2,441	2,772	2,601	2,769
ATMOSPHERIC SCIENTISTS	430	433	423	392
EARTH SCIENTISTS	1,295	1,190	1,100	1,175
OCEANOGRAPHERS	717	1,064	827	965
OTHER ENVIRONMENTAL SCIENTISTS 1/	-	86	250	237
MATHEMATICAL AND COMPUTER SCIENTISTS	2,190	1,760	1,931	1,933
MATHEMATICIANS	1,431	1,052	1,219	1,228
COMPUTER SCIENTISTS	759	708	713	706
LIFE SCIENTISTS	30,198	31,181	31,544	32,340
AGRICULTURAL SCIENTISTS	4,339	5,384	5,553	5,620
BIOLOGICAL SCIENTISTS	11,878	11,797	11,949	12,480
MEDICAL SCIENTISTS	13,953	13,508	13,360	13,625
OTHER LIFE SCIENTISTS 1/	-	492	682	615
PSYCHOLOGISTS	1,815	1,445	1,485	1,455
SOCIAL SCIENTISTS	4,408	3,660	3,536	3,436
ECONOMISTS	1,530	1,325	1,320	1,246
POLITICAL SCIENTISTS	650	546	526	528
SOCIOLOGISTS	971	814	695	657
OTHER SOCIAL SCIENTISTS	1,256	975	996	1,005

1/ DATA NOT AVAILABLE PRIOR TO 1979.
NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, STATUS, AND FIELD OF EMPLOYMENT: JANUARY 1981

TYPE OF INSTITUTION AND STATUS	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. AND COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
ALL INSTITUTIONS	333,408	34,789	34,059	10,026	38,900	137,238	23,341	55,055
FULL TIME	258,849	26,992	28,173	8,551	27,091	110,059	16,820	41,163
PART TIME	74,559	7,797	5,886	1,475	11,809	27,179	6,521	13,892
INSTITUTIONS GRANTING:								
DOCTORATE IN S&E	222,985	24,988	19,476	6,921	16,520	116,284	10,396	28,400
FULL TIME	182,464	20,862	16,937	6,136	13,379	94,175	8,192	22,783
PART TIME	40,521	4,126	2,539	785	3,141	22,109	2,204	5,617
MASTER'S IN S&E	37,655	3,112	4,987	1,397	6,637	6,190	4,819	10,513
FULL TIME	27,850	1,974	3,984	1,140	4,655	4,948	3,483	7,666
PART TIME	9,805	1,138	1,003	257	1,982	1,242	1,336	2,847
BACHELOR'S IN S&E	27,639	1,629	4,318	705	4,877	5,249	3,291	7,570
FULL TIME	21,234	1,247	3,633	560	3,583	4,113	2,398	5,700
PART TIME	6,405	382	685	145	1,294	1,136	893	1,870
OTHER DEGREES	916	75	48	75	135	312	63	208
FULL TIME	708	48	37	66	82	288	35	152
PART TIME	208	27	11	9	53	24	28	56
2-YEAR INSTITUTIONS	44,213	4,985	5,230	928	10,731	9,203	4,772	8,364
FULL TIME	26,593	2,861	3,582	649	5,392	6,535	2,712	4,862
PART TIME	17,620	2,124	1,648	279	5,339	2,668	2,060	3,502

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-18. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	324,066	333,408	2.9%	223,900	229,980	2.7%	100,166	103,428	3.3%
ENGINEERS	33,747	34,789	3.1	24,745	25,539	3.2	9,002	9,250	2.8
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,407	1,263	-10.2	811	774	-4.6	596	489	-18.0
CHEMICAL ENGINEERS	2,352	2,285	-2.8	1,697	1,634	-3.7	655	651	-.6
CIVIL ENGINEERS	5,530	5,688	2.9	4,408	4,493	1.9	1,122	1,195	6.5
ELECTRICAL ENGINEERS	8,156	8,557	4.9	5,351	5,588	4.4	2,805	2,969	5.8
MECHANICAL ENGINEERS	6,078	6,322	4.0	4,340	4,494	3.5	1,738	1,828	5.2
OTHER ENGINEERS	10,224	10,674	4.4	8,138	8,556	5.1	2,086	2,118	1.5
PHYSICAL SCIENTISTS	33,553	34,059	1.5	22,247	22,510	1.2	11,306	11,549	2.1
ASTRONOMERS	953	1,062	11.4	667	745	11.7	286	317	10.8
CHEMISTS	17,611	18,080	2.7	11,865	11,954	.8	5,746	6,126	6.6
PHYSICISTS	13,008	12,910	-.8	8,405	8,553	1.8	4,603	4,357	-5.3
OTHER PHYSICAL SCIENTISTS	1,981	2,007	1.3	1,310	1,258	-4.0	671	749	11.6
ENVIRONMENTAL SCIENTISTS	9,819	10,026	2.1	7,776	7,952	2.3	2,043	2,074	1.5
ATMOSPHERIC SCIENTISTS	943	918	-2.7	806	805	-.1	137	113	-17.5
EARTH SCIENTISTS	6,573	6,626	.8	5,288	5,350	1.2	1,285	1,276	-.7
OCEANOGRAPHERS	1,539	1,606	4.4	1,145	1,145	.0	394	461	17.0
OTHER ENVIRONMENTAL SCIENTISTS	764	876	14.7	537	652	21.4	227	224	-1.3
MATHEMATICAL AND COMPUTER SCIENTISTS	35,964	38,900	8.2	26,723	28,890	8.1	9,241	10,010	8.3
MATHEMATICIANS	27,087	28,536	5.3	20,186	21,287	5.5	6,901	7,249	5.0
COMPUTER SCIENTISTS	8,877	10,364	16.8	6,537	7,603	16.3	2,340	2,761	18.0
LIFE SCIENTISTS	133,640	137,238	2.7	88,690	90,642	2.2	44,950	46,596	3.7
AGRICULTURAL SCIENTISTS	15,888	15,894	.0	15,240	15,224	-.1	648	670	3.4
BIOLOGICAL SCIENTISTS	44,809	46,292	3.3	30,017	30,782	2.5	14,792	15,510	4.9
MEDICAL SCIENTISTS	67,119	68,534	2.1	39,398	39,541	.4	27,721	28,993	4.6
OTHER LIFE SCIENTISTS	5,824	6,518	11.9	4,035	5,095	26.3	1,789	1,423	-20.5
PSYCHOLOGISTS	23,257	23,341	.4	15,896	15,866	-.2	7,361	7,475	1.5
SOCIAL SCIENTISTS	54,086	55,055	1.8	37,823	38,581	2.0	16,263	16,474	1.3
ECONOMISTS	14,683	15,034	2.4	9,632	9,878	2.6	5,051	5,156	2.1
POLITICAL SCIENTISTS	11,194	11,560	3.3	7,280	7,619	4.7	3,914	3,941	.7
SOCIOLOGISTS	14,500	14,635	.9	10,085	10,156	.7	4,415	4,479	1.4
OTHER SOCIAL SCIENTISTS	13,709	13,826	.9	10,826	10,928	.9	2,883	2,898	.5

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81
TOTAL	254,861	258,849	1.6%	178,057	180,771	1.5%	76,804	78,078	1.7%
ENGINEERS	26,478	26,992	1.9	19,350	19,755	2.1	7,128	7,237	1.5
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,144	1,058	-7.5	659	654	-.8	485	404	-16.7
CHEMICAL ENGINEERS	1,886	1,901	.8	1,339	1,341	.1	547	560	2.4
CIVIL ENGINEERS	4,326	4,428	2.4	3,464	3,535	2.0	862	893	3.6
ELECTRICAL ENGINEERS	6,374	6,502	2.0	4,083	4,167	2.1	2,291	2,335	1.9
MECHANICAL ENGINEERS	4,820	4,931	2.3	3,494	3,538	1.3	1,326	1,393	5.1
OTHER ENGINEERS	7,928	8,172	3.1	6,311	6,520	3.3	1,617	1,652	2.2
PHYSICAL SCIENTISTS	27,994	28,173	.6	18,354	18,460	.6	9,640	9,713	.8
ASTRONOMERS	816	897	9.9	566	621	9.7	250	276	10.4
CHEMISTS	14,328	14,755	3.0	9,470	9,579	1.2	4,858	5,176	6.5
PHYSICISTS	11,326	11,014	-2.8	7,275	7,287	.2	4,051	3,727	-8.0
OTHER PHYSICAL SCIENTISTS	1,524	1,507	-1.1	1,043	973	-6.7	481	534	11.0
ENVIRONMENTAL SCIENTISTS	8,336	8,551	2.6	6,647	6,824	2.7	1,689	1,727	2.2
ATMOSPHERIC SCIENTISTS	793	763	-3.8	675	666	-1.3	118	97	-17.8
EARTH SCIENTISTS	5,556	5,632	1.4	4,511	4,580	1.5	1,045	1,052	.7
OCEANOGRAPHERS	1,386	1,465	5.7	1,017	1,031	1.4	369	434	17.6
OTHER ENVIRONMENTAL SCIENTISTS	601	691	15.0	444	547	23.2	157	144	-8.3
MATHEMATICAL AND COMPUTER SCIENTISTS	26,036	27,091	4.1	19,460	20,125	3.4	6,576	6,966	5.9
MATHEMATICIANS	19,922	20,224	1.5	14,799	14,974	1.2	5,123	5,250	2.5
COMPUTER SCIENTISTS	6,114	6,867	12.3	4,661	5,151	10.5	1,453	1,716	18.1
LIFE SCIENTISTS	108,114	110,059	1.8	72,761	74,133	1.9	35,353	35,926	1.6
AGRICULTURAL SCIENTISTS	14,432	14,354	-.5	13,835	13,743	-.7	597	611	2.3
BIOLOGICAL SCIENTISTS	38,725	39,866	2.9	25,824	26,313	1.9	12,901	13,553	5.1
MEDICAL SCIENTISTS	50,316	50,707	.8	29,875	30,066	.6	20,441	20,641	1.0
OTHER LIFE SCIENTISTS	4,641	5,132	10.6	3,227	4,011	24.3	1,414	1,121	-20.7
PSYCHOLOGISTS	16,751	16,820	.4	11,876	11,905	.2	4,875	4,915	.8
SOCIAL SCIENTISTS	41,152	41,163	.0	29,609	29,569	-.1	11,543	11,594	.4
ECONOMISTS	11,101	11,201	.9	7,545	7,609	.8	3,556	3,592	1.0
POLITICAL SCIENTISTS	8,768	8,992	2.6	5,905	6,117	3.6	2,863	2,875	.4
SOCIOLOGISTS	10,857	10,706	-1.4	7,758	7,604	-2.0	3,099	3,102	.1
OTHER SOCIAL SCIENTISTS	10,426	10,264	-1.6	8,401	8,239	-1.9	2,025	2,025	.0

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-20. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81
TOTAL	69,205	74,559	7.7%	45,843	49,209	7.3%	23,362	25,350	8.5%
ENGINEERS	7,269	7,797	7.3	5,395	5,784	7.2	1,874	2,013	7.4
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	263	205	-22.1	152	120	-21.1	111	85	-23.4
CHEMICAL ENGINEERS	466	384	-17.6	358	293	-18.2	108	91	-15.7
CIVIL ENGINEERS	1,204	1,260	4.7	944	958	1.5	260	302	16.2
ELECTRICAL ENGINEERS	1,782	2,055	15.3	1,268	1,421	12.1	514	634	23.3
MECHANICAL ENGINEERS	1,258	1,391	10.6	846	956	13.0	412	435	5.6
OTHER ENGINEERS	2,296	2,502	9.0	1,827	2,036	11.4	469	466	-.6
PHYSICAL SCIENTISTS	5,559	5,886	5.9	3,893	4,050	4.0	1,666	1,836	10.2
ASTRONOMERS	137	165	20.4	101	124	22.8	36	41	13.9
CHEMISTS	3,283	3,325	1.3	2,395	2,375	-.8	888	950	7.0
PHYSICISTS	1,682	1,896	12.7	1,130	1,266	12.0	552	630	14.1
OTHER PHYSICAL SCIENTISTS	457	500	9.4	267	285	6.7	190	215	13.2
ENVIRONMENTAL SCIENTISTS	1,483	1,475	-.5	1,129	1,128	-.1	354	347	-2.0
ATMOSPHERIC SCIENTISTS	150	155	3.3	131	139	6.1	19	16	-15.8
EARTH SCIENTISTS	1,017	994	-2.3	777	770	-.9	240	224	-6.7
OCEANOGRAPHERS	153	141	-7.8	128	114	-10.9	25	27	8.0
OTHER ENVIRONMENTAL SCIENTISTS	163	185	13.5	93	105	12.9	70	80	14.3
MATHEMATICAL AND COMPUTER SCIENTISTS	9,928	11,809	18.9	7,263	8,765	20.7	2,665	3,044	14.2
MATHEMATICIANS	7,165	8,312	16.0	5,387	6,313	17.2	1,778	1,999	12.4
COMPUTER SCIENTISTS	2,763	3,497	26.6	1,876	2,452	30.7	887	1,045	17.8
LIFE SCIENTISTS	25,526	27,179	6.5	15,929	16,509	3.6	9,597	10,670	11.2
AGRICULTURAL SCIENTISTS	1,456	1,540	5.8	1,405	1,481	5.4	51	59	15.7
BIOLOGICAL SCIENTISTS	6,084	6,426	5.6	4,193	4,469	6.6	1,891	1,957	3.5
MEDICAL SCIENTISTS	16,803	17,827	6.1	9,523	9,475	-.5	7,280	8,352	14.7
OTHER LIFE SCIENTISTS	1,183	1,386	17.2	808	1,084	34.2	375	302	-19.5
PSYCHOLOGISTS	6,506	6,521	.2	4,020	3,961	-1.5	2,486	2,560	3.0
SOCIAL SCIENTISTS	12,934	13,892	7.4	8,214	9,012	9.7	4,720	4,880	3.4
ECONOMISTS	3,582	3,833	7.0	2,087	2,269	8.7	1,495	1,564	4.6
POLITICAL SCIENTISTS	2,426	2,568	5.9	1,375	1,502	9.2	1,051	1,066	1.4
SOCIOLOGISTS	3,643	3,929	7.9	2,327	2,552	9.7	1,316	1,377	4.6
OTHER SOCIAL SCIENTISTS	3,283	3,562	8.5	2,425	2,689	10.9	858	873	1.7

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-21. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81
TOTAL	217,511	222,985	2.5%	147,636	150,902	2.2%	69,875	72,083	3.2%
ENGINEERS	24,476	24,988	2.1	17,185	17,643	2.7	7,291	7,345	.7
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,113	961	-13.7	574	549	-4.4	539	412	-23.6
CHEMICAL ENGINEERS	2,070	1,959	-5.4	1,500	1,393	-7.1	570	566	-.7
CIVIL ENGINEERS	3,796	3,828	.8	2,944	2,944	.0	852	884	3.8
ELECTRICAL ENGINEERS	5,479	5,629	2.7	3,195	3,258	2.0	2,284	2,371	3.8
MECHANICAL ENGINEERS	4,001	4,153	3.8	2,732	2,834	3.7	1,269	1,319	3.9
OTHER ENGINEERS	8,017	8,458	5.5	6,240	6,665	6.8	1,777	1,793	.9
PHYSICAL SCIENTISTS	19,194	19,476	1.5	12,641	12,793	1.2	6,553	6,683	2.0
ASTRONOMERS	735	798	8.6	496	539	8.7	239	259	8.4
CHEMISTS	9,200	9,610	4.5	6,394	6,480	1.3	2,806	3,130	11.5
PHYSICISTS	7,976	7,786	-2.4	5,021	5,101	1.7	2,955	2,679	-9.3
OTHER PHYSICAL SCIENTISTS	1,283	1,282	-.1	730	667	-8.6	553	615	11.2
ENVIRONMENTAL SCIENTISTS	6,733	6,921	2.8	5,265	5,404	2.6	1,468	1,517	3.3
ATMOSPHERIC SCIENTISTS	804	768	-4.5	685	674	-1.6	119	94	-21.0
EARTH SCIENTISTS	4,074	4,221	3.6	3,307	3,420	3.4	767	801	4.4
OCEANOGRAPHERS	1,362	1,436	5.4	978	987	.9	384	449	16.9
OTHER ENVIRONMENTAL SCIENTISTS	493	496	.6	295	323	9.5	198	173	-12.6
MATHEMATICAL AND COMPUTER SCIENTISTS	15,587	16,520	6.0	11,261	11,892	5.6	4,326	4,628	7.0
MATHEMATICIANS	11,035	11,437	3.6	8,089	8,417	4.1	2,946	3,020	2.5
COMPUTER SCIENTISTS	4,552	5,083	11.7	3,172	3,475	9.6	1,380	1,608	16.5
LIFE SCIENTISTS	113,538	116,284	2.4	74,081	75,565	2.0	39,457	40,719	3.2
AGRICULTURAL SCIENTISTS	13,498	13,496	.0	13,020	12,998	-.2	478	498	4.2
BIOLOGICAL SCIENTISTS	31,040	32,866	4.9	20,788	21,674	4.3	10,552	11,192	6.1
MEDICAL SCIENTISTS	64,182	65,266	1.7	37,307	37,264	-.1	26,875	28,002	4.2
OTHER LIFE SCIENTISTS	4,518	4,656	3.1	2,966	3,629	22.4	1,552	1,027	-33.8
PSYCHOLOGISTS	10,182	10,396	2.1	6,953	6,974	.3	3,229	3,422	6.0
SOCIAL SCIENTISTS	27,801	28,400	2.2	20,250	20,631	1.9	7,551	7,769	2.9
ECONOMISTS	8,087	8,190	1.3	5,663	5,735	1.3	2,424	2,455	1.3
POLITICAL SCIENTISTS	5,372	5,595	4.2	3,482	3,716	6.7	1,890	1,879	-.6
SOCIOLOGISTS	6,308	6,607	4.7	4,749	4,951	4.3	1,559	1,656	6.2
OTHER SOCIAL SCIENTISTS	8,034	8,008	-.3	6,356	6,229	-2.0	1,678	1,779	6.0

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-22. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81	1980	1981	PERCENT CHANGE 1980–81
TOTAL	179,475	182,464	1.7%	123,958	126,129	1.8%	55,517	56,335	1.5%
ENGINEERS	20,468	20,862	1.9	14,430	14,809	2.6	6,038	6,053	.2
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	945	846	-10.5	501	499	-.4	444	347	-21.8
CHEMICAL ENGINEERS	1,690	1,683	-.4	1,199	1,181	-1.5	491	502	2.2
CIVIL ENGINEERS	3,176	3,227	1.6	2,510	2,547	1.5	666	680	2.1
ELECTRICAL ENGINEERS	4,671	4,731	1.3	2,720	2,761	1.5	1,951	1,970	1.0
MECHANICAL ENGINEERS	3,409	3,504	2.8	2,366	2,427	2.6	1,043	1,077	3.3
OTHER ENGINEERS	6,577	6,871	4.5	5,134	5,394	5.1	1,443	1,477	2.4
PHYSICAL SCIENTISTS	16,749	16,937	1.1	10,917	11,040	1.1	5,832	5,897	1.1
ASTRONOMERS	685	735	7.3	465	493	6.0	220	242	10.0
CHEMISTS	7,761	8,241	6.2	5,278	5,441	3.1	2,483	2,800	12.8
PHYSICISTS	7,265	6,952	-4.3	4,539	4,545	.1	2,726	2,407	-11.7
OTHER PHYSICAL SCIENTISTS	1,038	1,009	-2.8	635	561	-11.7	403	448	11.2
ENVIRONMENTAL SCIENTISTS	5,913	6,136	3.8	4,638	4,815	3.8	1,275	1,321	3.6
ATMOSPHERIC SCIENTISTS	701	669	-4.6	590	580	-1.7	111	89	-19.8
EARTH SCIENTISTS	3,562	3,731	4.7	2,896	3,037	4.9	666	694	4.2
OCEANOGRAPHERS	1,257	1,337	6.4	894	910	1.8	363	427	17.6
OTHER ENVIRONMENTAL SCIENTISTS	393	399	1.5	258	288	11.6	135	111	-17.8
MATHEMATICAL AND COMPUTER SCIENTISTS	12,794	13,379	4.6	9,578	9,934	3.7	3,216	3,445	7.1
MATHEMATICIANS	9,135	9,368	2.6	6,831	7,012	2.6	2,304	2,356	2.3
COMPUTER SCIENTISTS	3,659	4,011	9.6	2,747	2,922	6.4	912	1,089	19.4
LIFE SCIENTISTS	92,693	94,175	1.6	61,444	62,568	1.8	31,249	31,607	1.1
AGRICULTURAL SCIENTISTS	12,549	12,458	-.7	12,092	11,990	-.8	457	468	2.4
BIOLOGICAL SCIENTISTS	28,133	29,353	4.3	18,565	19,179	3.3	9,568	10,174	6.3
MEDICAL SCIENTISTS	48,411	48,647	.5	28,428	28,522	.3	19,983	20,125	.7
OTHER LIFE SCIENTISTS	3,600	3,717	3.2	2,359	2,877	22.0	1,241	840	-32.3
PSYCHOLOGISTS	8,042	8,192	1.9	5,776	5,863	1.5	2,266	2,329	2.8
SOCIAL SCIENTISTS	22,816	22,783	-.1	17,175	17,100	-.4	5,641	5,683	.7
ECONOMISTS	6,687	6,676	-.2	4,876	4,868	-.2	1,811	1,808	-.2
POLITICAL SCIENTISTS	4,350	4,566	5.0	2,983	3,199	7.2	1,367	1,367	.0
SOCIOLOGISTS	5,189	5,184	-.1	3,987	3,964	-.6	1,202	1,220	1.5
OTHER SOCIAL SCIENTISTS	6,590	6,357	-3.5	5,329	5,069	-4.9	1,261	1,288	2.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-23. -- PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	38,036	40,521	6.5%	23,678	24,773	4.6%	14,358	15,748	9.7%
ENGINEERS	4,008	4,126	2.9	2,755	2,834	2.9	1,253	1,292	3.1
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	168	115	-31.5	73	50	-31.5	95	65	-31.6
CHEMICAL ENGINEERS	380	276	-27.4	301	212	-29.6	79	64	-19.0
CIVIL ENGINEERS	620	601	-3.1	434	397	-8.5	186	204	9.7
ELECTRICAL ENGINEERS	808	898	11.1	475	497	4.6	333	401	20.4
MECHANICAL ENGINEERS	592	649	9.6	366	407	11.2	226	242	7.1
OTHER ENGINEERS	1,440	1,587	10.2	1,106	1,271	14.9	334	316	-5.4
PHYSICAL SCIENTISTS	2,445	2,539	3.8	1,724	1,753	1.7	721	786	9.0
ASTRONOMERS	50	63	26.0	31	46	48.4	19	17	-10.5
CHEMISTS	1,439	1,369	-4.9	1,116	1,039	-6.9	323	330	2.2
PHYSICISTS	711	834	17.3	482	562	16.6	229	272	18.8
OTHER PHYSICAL SCIENTISTS	245	273	11.4	95	106	11.6	150	167	11.3
ENVIRONMENTAL SCIENTISTS	820	785	-4.3	627	589	-6.1	193	196	1.6
ATMOSPHERIC SCIENTISTS	103	99	-3.9	95	94	-1.1	8	5	-37.5
EARTH SCIENTISTS	512	490	-4.3	411	383	-6.8	101	107	5.9
OCEANOGRAPHERS	105	99	-5.7	84	77	-8.3	21	22	4.8
OTHER ENVIRONMENTAL SCIENTISTS	100	97	-3.0	37	35	-5.4	63	62	-1.6
MATHEMATICAL AND COMPUTER SCIENTISTS	2,793	3,141	12.5	1,683	1,958	16.3	1,110	1,183	6.6
MATHEMATICIANS	1,900	2,069	8.9	1,258	1,405	11.7	642	664	3.4
COMPUTER SCIENTISTS	893	1,072	20.0	425	553	30.1	468	519	10.9
LIFE SCIENTISTS	20,845	22,109	6.1	12,637	12,997	2.8	8,208	9,112	11.0
AGRICULTURAL SCIENTISTS	949	1,038	9.4	928	1,008	8.6	21	30	42.9
BIOLOGICAL SCIENTISTS	3,207	3,513	9.5	2,223	2,495	12.2	984	1,018	3.5
MEDICAL SCIENTISTS	15,771	16,619	5.4	8,879	8,742	-1.5	6,892	7,877	14.3
OTHER LIFE SCIENTISTS	918	939	2.3	607	752	23.9	311	187	-39.9
PSYCHOLOGISTS	2,140	2,204	3.0	1,177	1,111	-5.6	963	1,093	13.5
SOCIAL SCIENTISTS	4,985	5,617	12.7	3,075	3,531	14.8	1,910	2,086	9.2
ECONOMISTS	1,400	1,514	8.1	787	867	10.2	613	647	5.5
POLITICAL SCIENTISTS	1,022	1,029	.7	499	517	3.6	523	512	-2.1
SOCIOLOGISTS	1,119	1,423	27.2	762	987	29.5	357	436	22.1
OTHER SOCIAL SCIENTISTS	1,444	1,651	14.3	1,027	1,160	13.0	417	491	17.7

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-24. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	333,408	324,066	258,849	254,861	74,559	69,205	287,289	281,335
1 HARVARD UNIVERSITY	5,822	5,567	3,861	3,674	1,961	1,893	5,159	4,835
2 UNIV OF WIS-MADISON	3,807	3,764	3,143	3,127	664	637	3,525	3,472
3 OHIO STATE UNIVERSITY	3,734	3,648	2,050	2,542	1,684	1,106	3,231I	3,091
4 UNIVERSITY OF MINNESOTA	3,655	3,620	3,081	3,030	574	590	3,114	3,068
5 JOHNS HOPKINS UNIVERSITY	3,323	3,303	3,157	3,138	166	165	3,228	3,208
6 UNIVERSITY OF MICHIGAN	3,316	3,288	2,621	2,674	695	614	2,943	2,950
7 LOUISIANA STATE UNIV	3,053	3,067	2,498	2,559	555	508	2,626	2,680
8 UNIV OF ILL URBANA	2,563	2,343	2,246	2,052	317	291	1,313	1,140
9 UNIVERSITY OF WASHINGTON	2,521	2,529	1,966	1,990	555	539	2,254	2,267
10 UNIV OF CAL LOS ANGELES	2,503	2,420	1,444	1,389	1,059	1,031	1,676	1,567
TOTAL, 1ST 10 INSTS.	34,297	33,549	26,067	26,175	8,230	7,374	29,071	28,279
11 CORNELL UNIVERSITY	2,486	2,453	2,331	2,331	155	122	2,401I	2,371I
12 MASS INST OF TECHNOLOGY	2,319	2,366	2,119	2,075	200	291	2,224	2,228
13 UNIVERSITY OF FLORIDA	2,257	2,216	2,082	2,063	175	153	2,144	2,120
14 PENNSYLVANIA STATE UNIV	2,227	2,178	2,048	2,008	179	170	2,117	2,076
15 TEXAS A & M UNIVERSITY	2,216	2,168	2,216	2,168	0	0	2,216	2,168
16 UNIVERSITY OF KENTUCKY	2,215	2,230	1,926	1,930	289	300	2,005	2,022
17 COLUMBIA UNIV MAIN DIV	2,188	2,125	1,744	1,673	444	452	1,893	1,802I
18 NEW YORK UNIVERSITY	2,136	2,050	1,425	1,409	711	641	1,656	1,625
19 YALE UNIVERSITY	2,093	2,159	1,794	1,844	299	315	1,943I	2,002I
20 UNIV OF CAL BERKELEY	2,086	2,235	1,233	1,237	853	998	1,521	1,563
TOTAL, 1ST 20 INSTS.	56,520	55,729	44,985	44,913	11,535	10,816	49,194	48,258
21 PURDUE UNIVERSITY	2,034	1,996	1,742	1,726	292	270	1,848	1,819
22 UNIVERSITY OF PITTSBURGH	1,988E	1,918	1,703E	1,636	285E	282	1,812I	1,749
23 UNIVERSITY OF UTAH	1,965	1,678	1,733	1,276E	232	402E	1,801	1,486E
24 UNIVERSITY OF IOWA	1,914	1,836	1,588	1,553	326	283	1,791	1,727
25 UNIV OF TEXAS AT AUSTIN	1,912	1,944	1,699	1,657	213	287	1,803	1,793
26 UNIV OF PENNSYLVANIA	1,839	1,527	1,491	1,238	348	289	1,629	1,333
27 MICHIGAN STATE UNIVERSITY	1,812	1,818	1,695	1,669	117	149	1,740	1,725
28 N C STATE UNIV AT RALEIGH	1,703	1,691	1,588	1,577	115	114	1,622	1,620
29 UNIVERSITY OF ARIZONA	1,696	1,503	1,527	1,339	169	164	1,603	1,407
30 WAYNE STATE UNIVERSITY	1,688	1,462	1,056	1,061	632	401	1,293	1,221
TOTAL, 1ST 30 INSTS.	75,071	73,102	60,807	59,645	14,264	13,457	66,140	64,138
31 DUKE UNIVERSITY	1,653	1,589	1,563	1,446	90	143	1,601	1,418
32 IOWA ST U OF SCI & TECH	1,622	1,597	1,482	1,479	140	118	1,544	1,550
33 INDIANA UNIVERSITY	1,620	1,620	1,249	1,249	371	371	1,379	1,379
34 WASHINGTON UNIVERSITY	1,618	1,581	1,480	1,451	138	130	1,541	1,508
35 HOWARD UNIVERSITY	1,612I	1,499	979I	938	633I	561	1,116I	1,038I
36 UNIV OF SOUTHERN CAL	1,606	1,606	1,274	1,274	332	332	1,368	1,368
37 UNIV OF CAL DAVIS	1,585	1,538	1,213	1,159	372	379	1,227	1,176
38 UNIVERSITY OF CONNECTICUT	1,573	1,521	1,293	1,236	280	285	1,416	1,350
39 RUTGERS THE ST UNIV OF NJ	1,566	1,625	1,527	1,562	39	63	1,539	1,581
40 UNIVERSITY OF KANSAS	1,536I	1,509I	1,262I	1,243I	274I	266I	1,410I	1,385I
TOTAL, 1ST 40 INSTS.	91,062	88,787	74,129	72,682	16,933	16,105	80,283	77,892
41 CASE WESTERN RESERVE UNIV	1,503	1,521	1,270	1,272	233	249	1,351	1,380
42 UNIVERSITY OF COLORADO	1,493	1,619	1,382	1,413	111	206	1,445	1,503
43 TEMPLE UNIVERSITY	1,464	1,493	1,099	1,090	365	403	1,388I	1,406I
44 CUNY MT SINAI SCH OF MED	1,454I	1,374I	1,192I	1,142I	262I	232I	1,260I	1,191I
45 WASHINGTON STATE UNIV	1,398I	1,371I	1,045I	1,029I	353I	342I	675	1,219I
46 UNIV OF MD COLLEGE PARK	1,397	1,315	1,173	1,086	224	229	1,257	1,200
47 UNIVERSITY OF CHICAGO	1,366	1,368	1,315	1,321	51	47	1,336	1,344
48 STANFORD UNIVERSITY	1,364	1,364	1,102	1,102	262	262	1,119	1,119
49 NORTHWESTERN UNIVERSITY	1,348	978	1,091	844	257	134	1,220	911
50 UNIV OF CAL SAN FRANCISCO	1,319	1,353	899	938	420	415	861	905
TOTAL, 1ST 50 INSTS.	105,168	102,543	85,697	83,919	19,471	18,624	92,196	90,071

SEE FOOTNOTES AT END OF TABLE.

TABLE B-24. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1980 AND JANUARY 1981 - CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 UNIV OF HAWAII-MANOA	1,287	1,245	1,013	993	274	252	1,118	1,093
52 BOSTON UNIVERSITY	1,272	1,249	890	917	382	332	1,010	1,026
53 UNIV OF MISSOURI COLUMBIA	1,265	1,196	1,158	1,100	107	96	1,195	1,140
54 UNIVERSITY OF CINCINNATI	1,242	1,175	996	959	246	216	1,040	1,019
55 UNIV ALABAMA BIRMINGHAM	1,232	1,136	1,087	1,030	145	106	1,131	1,065
56 UNIV OF NC AT CHAPEL HILL	1,222	1,221	1,196	1,186	26	35	1,207	1,205
57 UNIVERSITY OF NEW MEXICO	1,215	1,201	883	891	332	310	1,033	1,023
58 SUNY AT BUFFALO	1,207I	1,183E	892I	878E	315I	305E	990I	972E
59 VIRGINIA COMMONWLTH UNIV	1,202	871	1,000	818	202	53	1,052	846
60 UNIVERSITY OF ROCHESTER	1,199	1,135	1,129	1,067	70	68	1,147	1,088
TOTAL, 1ST 60 INSTS.	117,511	114,155	95,941	93,758	21,570	20,397	103,123	100,548
61 GEORGE WASHINGTON UNIV	1,184	1,166	629	626	555	540	854	867
62 OREGON STATE UNIVERSITY	1,162	1,139	1,071	1,038	91	101	1,105	1,072
63 GEORGIA INSTITUTE OF TECH	1,162	1,292	1,097	1,189	65	103	1,124	1,214
64 UNIVERSITY OF MIAMI	1,148	1,138	1,059	1,047	89	91	1,098	1,085
65 NEW MEXICO STATE UNIV	1,143	855	1,060	790	83	65	1,096	828
66 KANS ST U - AG & APP SCI	1,142	1,130	983	919	159	211	1,063	1,036
67 UNIV OF SOUTH CAROLINA	1,141	1,074	1,001	958	140	116	1,050	998
68 WEST VIRGINIA UNIVERSITY	1,132	1,200	1,008	1,084	124	116	1,054	1,130
69 UNIVERSITY OF GEORGIA	1,125	1,097	1,084	1,059	41	38	1,102	1,076
70 YESHIVA UNIVERSITY	1,122	1,069	866	847	256	222	988	958
TOTAL, 1ST 70 INSTS.	128,972	125,315	105,799	103,315	23,173	22,000	113,660	110,813
71 VA POLYTECH INST & ST U	1,120	1,107	1,111	1,093	9	14	1,109	1,102
72 U TEX HLTH SCI CTR HOUSTN	1,069I	1,049	852I	839	217I	210	944I	927
73 SUNY AT STONY BROOK	1,064	988	963	895	101	93	994	922
74 COLORADO STATE UNIVERSITY	1,057	1,073	1,028	1,040	29	33	1,061	1,063
75 UNIV OF CAL SAN DIEGO	1,040	1,088	924	948	116	140	885	927
76 U TEX HLTH SCI CTR DALLAS	1,029	884	763	735	266	149	855	810
77 CMTY COL ALLEGHENY COUNTY	1,028I	950I	941	911	934	859I	780I	721I
78 U TENNESSEE KNOXVILLE	1,020	1,008	883	870	137	138	934	924
79 UNIV OF MD BALT PROF SCH	1,014	1,003	640	722	374	281	753	802
80 AUBURN UNIVERSITY	1,000	1,004	919	935	81	69	950	973
TOTAL, 1ST 80 INSTS.	139,413	135,469	113,976	111,483	25,437	23,986	122,929	119,986
81 COL OF MED & DENT OF N J	985	985	754	754	231	231	848	848
82 SOUTHERN ILL U-CARBONDALE	957	893	761	686	196	207	815	746
83 EMORY UNIVERSITY	948I	898I	806I	772I	142I	126I	833I	788I
84 UNIV OF ILL MED CTR CHGO	935	1,660	665	947	270	713	784	1,187
85 MED UNIV OF SO CAROLINA	931	860	770	727	161	133	729	785
86 U TEX HLTH SCI CTR S ANTO	929	941I	804	809I	125	132I	841	852I
87 UNIV OF NEBRASKA-LINCOLN	926	934	792	788	134	146	887	890
88 UNIV OF TEX CANCER CENTER	902I	888I	822I	810I	80I	78I	826I	813I
89 CLEMSON UNIVERSITY	894	852	882	841	12	11	888	847
90 VANDERBILT UNIVERSITY	885	747	747	712	138	35	783	640
TOTAL, 1ST 90 INSTS.	148,705	145,127	121,779	119,329	26,926	25,798	131,165	128,384
91 GEORGETOWN UNIVERSITY	882	848	817	794	65	54	850	822
92 NEW YORK MEDICAL COLLEGE	873	708I	617	486I	256	222I	746	590I
93 UNIVERSITY OF VIRGINIA	867	906	867	906	0	0	867	906
94 UNIV OF OKLA HLTH SCI CTR	857	756	705	602	152	154	776	661
95 UNIV OF MASS AT AMHERST	840	849	788	789	52	60	812	817
96 BAYLOR COL OF MEDICINE	834	792	733	738	101	54	784	766
97 SUNY DOWNSTATE MED CTR	824I	810	688I	678	136I	132	741I	729
98 UNIV OF SOUTH FLORIDA	801	634I	607	552I	194	82I	668	579I
99 UNIVERSITY OF LOUISVILLE	795	789	591	569	204	220	674	652
100 UNIV OREGON HLTH SCI CTR	770	806	511	558	259	248	602	672
TOTAL, 1ST 100 INSTS.	157,048	153,025	128,703	126,001	28,345	27,024	138,687	135,579

SEE FOOTNOTES AT END OF TABLE.

TABLE B-24. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
101 U OF ARKANSAS MED SCI CAM	749	744	662	679	87	65	689	702
102 FAIRLEIGH DICKINSON UNIV	746	693I	292	285I	454	408I	416	391I
103 UNIV TENN CTR HEALTH SCI	746	762	576	606	170	156	622	668
104 UNIVERSITY OF MISSISSIPPI	727	622	589	519	138	103	596I	231
105 ARIZONA STATE UNIVERSITY	725	742	691	677	34	65	708	705I
106 OKLAHOMA STATE UNIVERSITY	712	746I	661	706I	51	40I	684	734I
107 LOMA LINDA UNIVERSITY	712I	666I	482I	462I	230I	204I	608I	569I
108 TEXAS TECH UNIVERSITY	707	716	605	563	102	153	644	650
109 FLORIDA STATE UNIVERSITY	696	598	608	528	88	70	660	572
110 TUFTS UNIVERSITY	691	607	347	335	344	272	428	382
TOTAL, 1ST 110 INSTS.	164,259	159,921	134,216	131,361	30,043	28,560	144,745	141,187
111 U OF HOUSTON CENTRAL CAM	686	944	503	429	183	515	567	839I
112 SAN JOSE STATE UNIVERSITY	675	754I	356	399I	319	355I	356	488I
113 CITY COLLEGES OF CHICAGO	661	656	661	656	0	0	661I	656
114 MISSISSIPPI STATE UNIV	660	722	642	701	18	21	651	713
115 UNIV OF ARK FAYETTEVILLE	657	834	597	792	60	42	618	810
116 BRIGHAM YOUNG UNIVERSITY	654	649	585	570	69	79	607	540
117 UNIVERSITY OF IDAHO	648	600	615	569	33	31	631	584
118 UNIV OF ILL CHICAGO CIR	643	633	527	530	116	103	564	546
119 ST LOUIS UNIVERSITY	636	524	514	432	122	92	553	491
120 MEDICAL COL OF GEORGIA	634	556	492	445	142	111	563	481
TOTAL, 1ST 120 INSTS.	170,813	166,793	139,708	136,884	31,105	29,909	150,518	147,336
121 UNIV OF VT & ST AGRIC COL	631	546	582	456	49	90	597	496
122 CHAPMAN COLLEGE	623I	599I	43I	42I	580I	557I	234I	226I
123 DARTMOUTH COLLEGE	617	488I	314	333I	303	155I	373	360I
124 LOYOLA UNIV - CHICAGO	616	625	334	334	282	291	428	440
125 UNIV OF CAL IRVINE	614	610	520	513	94	97	535	522
126 CARNEGIE-MELLON UNIV	613I	582	546I	523	67I	59	572I	544
127 CAL POLY ST U SAN LUIS OB	609	612	510	508	99	104	545	543
128 TULANE UNIVERSITY	602	575	541	521	61	54	486	537
129 PRINCETON UNIVERSITY	582	561	529	515	53	46	558	537
130 CALIF ST UNIV LONG BEACH	577	565	323	320	254	245	408	407
TOTAL, 1ST 130 INSTS.	176,897	172,556	143,950	140,949	32,947	31,607	155,258	151,950
131 INTER AM U P R-CENTRAL	574	517	238	215	336	302	373	357
132 UNIV OF WIS-MILWAUKEE	572	597	404	439	168	158	460	501
133 CALIFORNIA INST OF TECH	571	562	556	548	15	14	564	556
134 UNIVERSITY OF DELAWARE	562	572	540	532	22	40	550	551
135 UNIVERSITY OF WYOMING	560	552	491	505	69	47	525	528
136 SAN DIEGO STATE UNIV	560	480	381	358	179	122	423	405
137 SAN FRANCISCO STATE UNIV	548	598	268	263	280	335	374	360
138 UNIV OF CAL SANTA BARBARA	546	498	365	353	181	145	438	406
139 SUNY AT ALBANY	537	447	457	376	80	71	485	409
140 MONTANA STATE UNIVERSITY	535	454I	471	403I	64	51I	504I	411I
TOTAL, 1ST 140 INSTS.	182,462	177,833	148,121	144,941	34,341	32,892	159,955	156,435
141 MIAMI-DADE CMTY COLLEGE	532	548	338	343	194	205	442	467
142 CALIF ST UNIV SACRAMENTO	529	433I	379	321I	150	112I	428	389I
143 UNIV OF P R-MED SCI CMPUS	526I	516I	398I	392I	128I	124I	491I	475I
144 CALIF ST UNIV NORTHRIDGE	520	505	301	300	219	205	368	373
145 CUYAHOGA CMTY COL DIST	519I	486I	183I	177I	336I	309I	296I	278I
146 MARQUETTE UNIVERSITY	512	482	295	277	217	205	356	338
147 UNIV OF P R-RIO PIEDRAS	504I	495I	448I	441I	56I	54I	468I	460I
148 LONG ISLAND UNIVERSITY	503	297	303	149	200	148	369	210
149 SYRACUSE UNIVERSITY	490	487	437	420	53	67	465	456
150 SOUTH DAKOTA STATE UNIV	490	493	466	477	24	16	478	485
TOTAL, 1ST 150 INSTS.	187,587	182,575	151,669	148,238	35,918	34,337	164,119	160,367

SEE FOOTNOTES AT END OF TABLE.

TABLE B-24. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1980 AND JANUARY 1981

- CONTINUED

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
151 UNIVERSITY OF DAYTON	485	432	383	348	102	84	415	372
152 CUNY BROOKLYN COLLEGE	480	657I	314	300I	166	357I	326	514I
153 PHILA COL OSTEOPATHIC MED	478	137	103	83	375	54	1	90
154 WRIGHT STATE UNIVERSITY	474	468	393	387	81	81	401	410
155 WAKE FOREST UNIVERSITY	472	455	462	442	10	13	467	448
156 KENT STATE UNIVERSITY	466	379	427	367	39	12	438	325
157 CALIF ST UNIV FULLERTON	462I	457I	288I	287I	174I	170I	405I	401I
158 OHIO UNIVERSITY	461	431I	366	396I	95	35I	403	411I
159 CALIF ST POLY UNIV POMONA	461	475	282	282	179	193	344	348
160 SINCLAIR COMMUNITY COL	460	215	145	74	315	141	187	116
TOTAL, 1ST 160 INSTS.	192,286	186,681	154,832	151,204	37,454	35,477	167,511	163,805
161 UTAH STATE UNIVERSITY	453	443	422	429	31	14	436	437
162 NORTH DAKOTA STATE UNIV	445	418	435	409	10	9	439	416
163 INST OF AGRI UNIV OF TENN	444	465	444	464	0	1	444	465
164 THE UNIVERSITY OF ALABAMA	438	377	385	352	53	25	401	361I
165 UNIV OF CAL RIVERSIDE	438	433	375	377	63	56	353	352
166 ILLINOIS STATE UNIVERSITY	434	385	376	336	58	49	367	356
167 CUNY QUEENS COLLEGE	434	457	252	284	182	173	334	313
168 UNIV OF MAINE ORONO	432	452	407	419	25	33	420	434
169 CALIF ST UNIV LOS ANGELES	431	425	252	256	179	169	313	313
170 WEST VALLEY COLLEGE	431I	403I	130I	126I	301I	277I	219I	204I
TOTAL, 1ST 170 INSTS.	196,666	190,939	158,310	154,656	38,356	36,283	171,240	167,457
171 NORTHEASTERN UNIVERSITY	429	673	350	442	79	231	377	495
172 NORTHERN ILLINOIS UNIV	419	417	352	366	67	51	363	391
173 US AIR FORCE ACADEMY	418I	405I	418I	405I	0I	0I	418I	405I
174 ROCKEFELLER UNIVERSITY	415	407	401	390	14	17	408	399
175 UNIV OF WIS-EXTENSION DIV	414I	400	387I	375	27I	25	393I	331
176 EAST CAROLINA UNIVERSITY	414	414	350	350	64	64	406	406
177 MONTGOMERY COLLEGE	413I	388I	160I	155I	253I	233I	246I	231I
178 WESTERN MICHIGAN UNIV	413	383	325	317	88	66	343	328
179 RENSSELAER POLYTECH INST	411	406	368	361	43	45	386	374
180 UNIV OF RHODE ISLAND	409	411	409	411	0	0	409I	411
TOTAL, 1ST 180 INSTS.	200,821	195,243	161,830	158,228	38,991	37,015	174,990	171,229
181 U OF NEB MED CTR AT OMAHA	407I	400I	342I	337I	65I	63I	366I	359I
182 NEW YORK INST TECHNOLOGY	402	284	184	162	218	122	261	209
183 U TEX MED BRNCH GALVESTON	402I	396I	402I	396I	0I	0I	402I	396I
184 CUNY CITY COLLEGE	401I	398I	336I	335I	65I	63I	385I	382I
185 ST JOHN'S UNIVERSITY (NY)	399	318	219	194	180	124	278	234
186 BROWN UNIVERSITY	394	386	370	362	24	24	381	372
187 OLD DOMINION UNIVERSITY	391	410	277	304	114	106	283	324
188 UNIV OF NEW HAMPSHIRE	386	496	342	439	44	57	355	454
189 N J INST OF TECHNOLOGY	386	331	245	225	141	106	285	258
190 UNIVERSITY OF OREGON MAIN	386	355	261	245	125	110	323	284
TOTAL, 1ST 190 INSTS.	204,775	199,017	164,808	161,227	39,967	37,790	178,310	174,503
191 SUNY AG & TECH FARMNGDALE	385	347	202	192	183	155	242	270I
192 CALIF STATE UNIV FRESNO	384	288	287	235	97	53	317I	253I
193 CALIF STATE UNIV CHICO	381	381	287	287	94	94	437I	402
194 UNIVERSITY OF NOTRE DAME	380	373	347	345	33	28	363	360
195 UNIV OF P R-MAYAGUEZ	376I	371I	361I	356I	15I	15I	370I	365I
196 SAN ANTONIO CMTY COL DIST	376	291	206	137	170	154	295I	224I
197 UNIV OF TEX AT ARLINGTON	376	390	293	290	83	100	316	315
198 CUNY HUNTER COLLEGE	373I	369I	199I	199I	174I	170I	286I	283I
199 AMERICAN UNIVERSITY	372	390	192	176	180	214	259	265
200 WICHITA STATE UNIVERSITY	369	338	293	282	76	56	332	303
TOTAL, 1ST 200 INSTS.	208,547	202,555	167,475	163,726	41,072	38,829	181,530	177,546

SEE FOOTNOTES AT END OF TABLE.

TABLE B-24. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
201 UNIVERSITY OF TOLEDO	368	345	269	261	99	84	308	291
202 SUNY UPSTATE MEDICAL CTR	367I	361I	349I	344I	18I	17I	357I	351I
203 MIAMI UNIVERSITY (OHIO)	364	377	294	340	70	37	328	361
204 MICHIGAN TECH UNIVERSITY	363	365	347	352	16	13	354	358
205 ILLINOIS INST OF TECH	362	245	198	198	164	47	252	213
206 US MILITARY ACADEMY	360I	349	360I	349	0I	0	360I	349I
207 CREIGHTON UNIVERSITY	360	350	277	265	83	85	304	290
208 RUSH UNIVERSITY	360	348	287	284	73	64	323	318
209 FLORIDA INST OF TECH	358	347	142	134	216	213	218	208
210 UNIV OF OKLAHOMA NORMAN	357	357	343	347	14	10	348	351
TOTAL, 1ST 210 INSTS.	212,166	205,999	170,341	166,600	41,825	39,399	184,685	180,638
211 INTER AM U P R-SAN GERMAN	355I	342I	166I	161I	189I	181I	247I	238I
212 PORTLAND STATE UNIVERSITY	351	326	241	225	110	101	275	263I
213 SAN DIEGO EVENING COLLEGE	351I	324I	23I	22I	328I	302I	261I	241I
214 UNIV OF MISSOURI ROLLA	345	326	317	325	28	1	323	326
215 YOUNGSTOWN ST UNIVERSITY	342	324	217	199	125	125	277	240
216 THOMAS JEFFERSON UNIV	342	335	277	272	65	63	292	287
217 CUNY BERNARD BARUCH COL	342	286I	151	144I	191	142I	211	195I
218 UNIV OF MISSOURI KAN CITY	340	276	299	261	41	15	317I	267
219 SUNY NASSAU CMTY COLLEGE	339	334	183	17[illegible]	156	160	284	282
220 HAHNEMANN MED COL & HOSP	336I	320I	308I	295I	28I	25I	32[illegible]	307I
TOTAL, 1ST 220 INSTS.	215,609	209,192	172,523	168,678	43,086	40,514	187,499	183,286
221 UNIV OF NEVADA - RENO	336	231	262	203	74	28	282	202
222 TOWSON STATE UNIVERSITY	330	322	163	166	167	156	225[illegible]	287I
223 UNIVERSITY OF N DAKOTA	329I	324	292I	288	37I	36	30[illegible]I	301
224 UNIVERSITY OF AKRON	323	268	231	211	92	57	25[illegible]	233
225 US NAVAL ACADEMY	322	322	322	322	0	0	322	322
226 GEORGIA STATE UNIVERSITY	318	318	283	283	35	35	304	312
227 UNIVERSITY OF DENVER	318	300	295	279	23	21	306	292
228 KEAN COL OF NEW JERSEY	317	199I	137	102I	180	97I	198	137I
229 TARRANT COUNTY JUNIOR COL	314I	298I	177I	172I	137I	126I	235I	223I
230 POLYTECHNIC INST OF N Y	308	326	198	236	110	90	217I	265
TOTAL, 1ST 230 INSTS.	218,824	212,100	174,883	170,940	43,941	41,160	190,154	185,862
231 RICE UNIVERSITY	306	400	276	372	30	28	291	390
232 HILLSBOROUGH CMTY COLLEGE	306	254	96	100	210	154	169	154
233 S ILLINOIS U EDWARDSVILLE	301	321	241	241	60	80	261	266
234 METROPOLITAN STATE COL	300	-C	163	-C	137	-C	197	-C
235 UNIV OF N C AT CHARLOTTE	297	266	204	202	93	64	239	228
236 DREXEL UNIVERSITY	297	274	228	221	69	53	257	245
237 MEMPHIS STATE UNIVERSITY	297	325	258	258	39	67	270	277
238 UNIVERSITY OF DETROIT	294	298	120	117	174	181	163	165
239 UNIVERSITY OF LOWELL	294	275	245	243	49	32	273I	254
240 LEHIGH UNIVERSITY	293	297	262	267	31	30	272	277
TOTAL, 1ST 240 INSTS.	221,809	215,129	176,976	173,129	44,833	42,000	192,547	188,311
241 MERCY COLLEGE	292I	272	66I	64	226I	208	126I	116
242 U MASS MED SCHL WORCESTER	291I	286I	251I	247I	40I	39I	279I	274I
243 COLLEGE OF WILLIAM & MARY	290	294	283	285	7	9	286	289
244 PORTLAND COMMUNITY COL	289	243I	136	155I	153	88I	180	185I
245 BRANDEIS UNIVERSITY	289I	276I	274I	263I	15I	13I	283I	270I
246 SUNY ERIE CMTY COLLEGE	286I	269I	127I	123I	159I	146I	167I	158I
247 ALBANY MEDICAL COLLEGE	285	352I	255	304I	30	48I	264	326I
248 SUNY AT BINGHAMTON	281	274	241	229	40	45	253	241
249 UNIVERSITY OF NEW ORLEANS	281	284	236	243	45	41	249	257
250 CLEVELAND STATE UNIV	280	267	217	210	63	57	233	222
TOTAL, 1ST 250 INSTS.	224,673	217,946	179,062	175,252	45,611	42,694	194,872	190,651
TOTAL, ALL OTHER INSTS.	108,735	106,120	79,787	79,609	28,948	26,511	92,416	90,684

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-25. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	222,985	217,511	182,464	179,475	40,521	38,036	196,174	192,573
1 HARVARD UNIVERSITY	5,822	5,567	3,861	3,674	1,961	1,893	5,159	4,835
2 UNIV OF WIS-MADISON	3,807	3,764	3,143	3,127	664	637	3,525	3,472
3 OHIO STATE UNIVERSITY	3,734	3,648	2,050	2,542	1,684	1,106	3,231I	3,091
4 UNIVERSITY OF MINNESOTA	3,655	3,620	3,081	3,030	574	590	3,114	3,068
5 JOHNS HOPKINS UNIVERSITY	3,323	3,303	3,157	3,138	166	165	3,228	3,208
6 UNIVERSITY OF MICHIGAN	3,316	3,288	2,621	2,674	695	614	2,943	2,950
7 LOUISIANA STATE UNIV	3,053	3,067	2,498	2,559	555	508	2,626	2,680
8 UNIV OF ILL URBANA	2,563	2,343	2,246	2,052	317	291	1,313	1,140
9 UNIVERSITY OF WASHINGTON	2,521	2,529	1,966	1,990	555	539	2,254	2,267
10 UNIV OF CAL LOS ANGELES	2,503	2,420	1,444	1,389	1,059	1,031	1,676	1,567
TOTAL, 1ST 10 INSTS.	34,297	33,549	26,067	26,175	8,230	7,374	29,071	28,279
11 CORNELL UNIVERSITY	2,486	2,453	2,331	2,331	155	122	2,401I	2,371I
12 MASS INST OF TECHNOLOGY	2,319	2,366	2,119	2,075	200	291	2,224	2,228
13 UNIVERSITY OF FLORIDA	2,257	2,216	2,082	2,063	175	153	2,144	2,120
14 PENNSYLVANIA STATE UNIV	2,227	2,178	2,048	2,008	179	170	2,117	2,076
15 TEXAS A & M UNIVERSITY	2,216	2,168	2,216	2,168	0	0	2,216	2,168
16 UNIVERSITY OF KENTUCKY	2,215	2,230	1,926	1,930	289	300	2,005	2,022
17 COLUMBIA UNIV MAIN DIV	2,188	2,125	1,744	1,673	444	452	1,893	1,802I
18 NEW YORK UNIVERSITY	2,136	2,050	1,425	1,409	711	641	1,656	1,625
19 YALE UNIVERSITY	2,093	2,159	1,794	1,844	299	315	1,943I	2,002I
20 UNIV OF CAL BERKELEY	2,086	2,235	1,233	1,237	853	998	1,521	1,563
TOTAL, 1ST 20 INSTS.	56,520	55,729	44,985	44,913	11,535	10,816	49,194	48,258
21 PURDUE UNIVERSITY	2,034	1,996	1,742	1,726	292	270	1,848	1,819
22 UNIVERSITY OF PITTSBURGH	1,988E	1,918	1,703E	1,636	285E	282	1,812I	1,749
23 UNIVERSITY OF UTAH	1,965	1,678	1,733	1,276E	232	402E	1,801	1,486E
24 UNIVERSITY OF IOWA	1,914	1,83[illegible]	1,588	1,553	326	283	1,791	1,727
25 UNIV OF TEXAS AT AUSTIN	1,912	1,9[illegible]	1,699	1,657	213	287	1,803	1,793
26 UNIV OF PENNSYLVANIA	1,839	[illegible],527	1,491	1,238	348	289	1,629	1,333
27 MICHIGAN STATE UNIVERSITY	1,812	1,818	1,695	1,669	117	149	1,740	1,725
28 N C STATE UNIV AT RALEIGH	1,703	1,691	1,588	1,577	115	114	1,622	1,620
29 UNIVERSITY OF ARIZONA	1,696	1,503	1,527	1,339	169	164	1,603	1,407
30 WAYNE STATE UNIVERSITY	1,688	1,462	1,056	1,061	632	401	1,293	1,221
TOTAL, 1ST 30 INSTS.	75,071	73,102	60,807	59,645	14,264	13,457	66,140	64,138
31 DUKE UNIVERSITY	1,653	1,589	1,563	1,446	90	143	1,601	1,418
32 IOWA ST U OF SCI & TECH	1,622	1,597	1,482	1,479	140	118	1,544	1,550
33 INDIANA UNIVERSITY	1,620	1,620	1,249	1,249	371	371	1,379	1,379
34 WASHINGTON UNIVERSITY	1,618	1,581	1,480	1,451	138	130	1,541	1,508
35 HOWARD UNIVERSITY	1,612I	1,499	979I	938	633I	561	1,116I	1,038I
36 UNIV OF SOUTHERN CAL	1,606	1,606	1,274	1,274	332	332	1,368	1,368
37 UNIV OF CAL DAVIS	1,585	1,538	1,213	1,159	372	379	1,227	1,176
38 UNIVERSITY OF CONNECTICUT	1,573	1,521	1,293	1,236	280	285	1,416	1,350
39 RUTGERS THE ST UNIV OF NJ	1,566	1,625	1,527	1,562	39	63	1,539	1,581
40 UNIVERSITY OF KANSAS	1,536I	1,509I	1,262I	1,243I	274I	266I	1,410I	1,385I
TOTAL, 1ST 40 INSTS.	91,062	88,787	74,129	72,682	16,933	16,105	80,283	77,892
41 CASE WESTERN RESERVE UNIV	1,503	1,521	1,270	1,272	233	249	1,351	1,380
42 UNIVERSITY OF COLORADO	1,493	1,619	1,382	1,413	111	206	1,445	1,503
43 TEMPLE UNIVERSITY	1,464	1,493	1,099	1,090	365	403	1,388I	1,406I
44 CUNY MT SINAI SCH OF MED	1,454I	1,374I	1,192I	1,142I	262I	232I	1,260I	1,191I
45 WASHINGTON STATE UNIV	1,398I	1,371I	1,045I	1,029I	353I	342I	675I	1,219I
46 UNIV OF MD COLLEGE PARK	1,397	1,315	1,173	1,086	224	229	1,257	1,200
47 UNIVERSITY OF CHICAGO	1,366	1,368	1,315	1,321	51	47	1,336	1,344
48 STANFORD UNIVERSITY	1,364	1,364	1,102	1,102	262	262	1,119	1,119
49 NORTHWESTERN UNIVERSITY	1,348	978	1,091	844	257	134	1,220	911
50 UNIV OF CAL SAN FRANCISCO	1,319	1,353	899	938	420	415	861	905
TOTAL, 1ST 50 INSTS.	105,168	102,543	85,697	83,919	19,471	18,624	92,196	90,071

SEE FOOTNOTES AT END OF TABLE.

TABLE B-25. -- SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 UNIV OF HAWAII-MANOA	1,287	1,245	1,013	993	274	252	1,118	1,093
52 BOSTON UNIVERSITY	1,272	1,249	890	917	382	332	1,010	1,026
53 UNIV OF MISSOURI COLUMBIA	1,265	1,196	1,158	1,100	107	96	1,195	1,140
54 UNIVERSITY OF CINCINNATI	1,242	1,175	996	959	246	216	1,040	1,019
55 UNIV ALABAMA BIRMINGHAM	1,232	1,136	1,087	1,030	145	106	1,131	1,065
56 UNIV OF NC AT CHAPEL HILL	1,222	1,221	1,196	1,186	26	35	1,207	1,205
57 UNIVERSITY OF NEW MEXICO	1,215	1,201	883	891	332	310	1,033	1,023
58 SUNY AT BUFFALO	1,207I	1,183E	892I	878E	315I	305E	990I	972E
59 VIRGINIA COMMONWLTH UNIV	1,202	871	1,000	818	202	53	1,052	846
60 UNIVERSITY OF ROCHESTER	1,199	1,135	1,129	1,067	70	68	1,147	1,088
TOTAL, 1ST 60 INSTS.	117,511	114,155	95,941	93,758	21,570	20,397	103,123	100,548
61 GEORGE WASHINGTON UNIV	1,184	1,166	629	626	555	540	854	867
62 GEORGIA INSTITUTE OF TECH	1,162	1,292	1,097	1,189	65	103	1,124	1,214
63 OREGON STATE UNIVERSITY	1,162	1,139	1,071	1,038	91	101	1,105	1,072
64 UNIVERSITY OF MIAMI	1,148	1,138	1,059	1,047	89	91	1,098	1,085
65 NEW MEXICO STATE UNIV	1,143	855	1,060	790	83	65	1,096	828
66 KANS ST U - AG & APP SCI	1,142	1,130	983	919	159	211	1,063	1,036
67 UNIV OF SOUTH CAROLINA	1,141	1,074	1,001	958	140	116	1,050	998
68 WEST VIRGINIA UNIVERSITY	1,132	1,200	1,008	1,084	124	116	1,054	1,130
69 UNIVERSITY OF GEORGIA	1,125	1,097	1,084	1,059	41	38	1,102	1,076
70 YESHIVA UNIVERSITY	1,122	1,069	866	847	256	222	988	958
TOTAL, 1ST 70 INSTS.	128,972	125,315	105,799	103,315	23,173	22,000	113,660	110,813
71 VA POLYTECH INST & ST U	1,120	1,107	1,111	1,093	9	14	1,109	1,102
72 U TEX HLTH SCI CTR HOUSTN	1,069I	1,049	852I	839	217I	210	944I	927
73 SUNY AT STONY BROOK	1,064	988	963	895	101	93	994	922
74 COLORADO STATE UNIVERSITY	1,057	1,073	1,028	1,040	29	33	1,061	1,063
75 UNIV OF CAL SAN DIEGO	1,040	1,088	924	948	116	140	885	927
76 U TEX HLTH SCI CTR DALLAS	1,029	884	763	735	266	149	855	810
77 U TENNESSEE KNOXVILLE	1,020	1,008	883	870	137	138	934	924
78 UNIV OF MD BALT PROF SCH	1,014	1,003	640	722	374	281	753	802
79 AUBURN UNIVERSITY	1,000	1,004	919	935	81	69	950	973
80 COL OF MED & DENT OF N J	985	985	754	754	231	231	848	848
TOTAL, 1ST 80 INSTS.	139,370	135,504	114,636	112,146	24,734	23,358	122,996	120,112
81 SOUTHERN ILL U-CARBONDALE	957	893	761	686	196	207	815	746
82 EMORY UNIVERSITY	948I	898I	806I	772I	142I	126I	833I	788I
83 UNIV OF ILL MED CTR CHGO	935	1,660	665	947	270	713	784	1,187
84 MED UNIV OF SO CAROLINA	931	860	770	727	161	133	729	785
85 U TEX HLTH SCI CTR S ANTO	929	941I	804	809I	125	132I	841	852I
86 UNIV OF NEBRASKA-LINCOLN	926	934	792	788	134	146	887	890
87 UNIV OF TEX CANCER CENTER	902I	888I	822I	810I	80I	78I	826I	813I
88 CLEMSON UNIVERSITY	894	852	882	841	12	11	888	847
89 VANDERBILT UNIVERSITY	885	747	747	712	138	35	783	640
90 GEORGETOWN UNIVERSITY	882	848	817	794	65	54	850	822
TOTAL, 1ST 90 INSTS.	148,559	145,025	122,502	120,032	26,057	24,993	131,234	128,404
91 NEW YORK MEDICAL COLLEGE	873	708I	617	486I	256	222I	746	590I
92 UNIVERSITY OF VIRGINIA	867	906	867	906	0	0	867	906
93 UNIV OF OKLA HLTH SCI CTR	857	756	705	602	152	154	776	661
94 UNIV OF MASS AT AMHERST	840	849	788	789	52	60	812	817
95 BAYLOR COL OF MEDICINE	834	792	733	738	101	54	784	766
96 SUNY DOWNSTATE MED CTR	824I	810	688I	678	136I	132	741I	729
97 UNIV OF SOUTH FLORIDA	801	634I	607	552I	194	82I	668	579I
98 UNIVERSITY OF LOUISVILLE	795	789	591	569	204	220	674	652
99 UNIV OREGON HLTH SCI CTR	770	806	511	558	259	248	602	672
100 U OF ARKANSAS MED SCI CAM	749	744	662	679	87	65	689	702
TOTAL, 1ST 100 INSTS.	156,769	152,819	129,271	126,589	27,498	26,230	138,596	135,539
TOTAL, ALL OTHER INSTS.	66,216	64,692	53,193	52,886	13,023	11,806	57,578	57,013

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-26. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1979 - JANUARY 1981

INSTITUTIONAL RANKING	TOTAL FTE			R&D FTE		
	1981	1980	1979	1981	1980	1979
TOTAL, ALL INSTITUTIONS	287,289	281,335	186,544	57,161	56,394	54,432
1 HARVARD UNIVERSITY	5,199	4,835	4,779	910	837	813
2 UNIV OF WIS-MADISON	3,525	3,472	3,497	1,931	1,899	1,890
3 OHIO STATE UNIVERSITY	3,231I	3,091	2,981	651I	688	558
4 JOHNS HOPKINS UNIVERSITY	3,228	3,208	3,208E	2,525	2,534	2,390E
5 UNIVERSITY OF MINNESOTA	3,114	3,068	3,034	611	557	623
6 UNIVERSITY OF MICHIGAN	2,943	2,950	3,080	991	1,001	960
7 LOUISIANA STATE UNIV	2,626	2,680	2,558	863	880	910
8 CORNELL UNIVERSITY	2,401I	2,371I	2,577E	1,080I	1,068I	1,109
9 UNIVERSITY OF WASHINGTON	2,254	2,267	2,292	756	739	781
10 MASS INST OF TECHNOLOGY	2,224	2,228	2,247	851I	879I	882
TOTAL, 1ST 10 INSTS.	30,707	30,171	30,253	11,171	11,084	10,917
11 TEXAS A & M UNIVERSITY	2,216	2,168	2,138	854	882	869
12 UNIVERSITY OF FLORIDA	2,144	2,120	2,056	337	364	352
13 PENNSYLVANIA STATE UNIV	2,117	2,076	2,100	555	511	523
14 UNIVERSITY OF KENTUCKY	2,005	2,022	1,648	296	355	297
15 YALE UNIVERSITY	1,943I	2,002I	1,895	1,135	1,170	922I
16 COLUMBIA UNIV MAIN DIV	1,893	1,802I	1,761I	661	628I	610I
17 PURDUE UNIVERSITY	1,848	1,819	1,832	303	281	281
18 UNIVERSITY OF PITTSBURGH	1,812I	1,749	1,749	196I	200	200
19 UNIV OF TEXAS AT AUSTIN	1,803	1,793	1,792	720	721	707
20 UNIVERSITY OF UTAH	1,801	1,486E	1,486	354I	358I	358I
TOTAL, 1ST 20 INSTS.	50,293	49,209	48,710	16,586	16,555	16,037
21 UNIVERSITY OF IOWA	1,791	1,727	1,622	286	274	191
22 MICHIGAN STATE UNIVERSITY	1,740	1,725	1,687	508	496	465
23 UNIV OF CAL LOS ANGELES	1,676	1,567	1,920	397	398	506
24 NEW YORK UNIVERSITY	1,656	1,625	1,520	603	571	380
25 UNIV OF PENNSYLVANIA	1,629	1,333	1,292	533	493	386
26 N C STATE UNIV AT RALEIGH	1,622	1,620	1,583	409	269	263
27 UNIVERSITY OF ARIZONA	1,603	1,407	1,463	121	747	672
28 DUKE UNIVERSITY	1,601	1,418	1,705	736	555E	966
29 IOWA ST U OF SCI & TECH	1,544	1,550	1,596	373	362	419
30 WASHINGTON UNIVERSITY	1,541	1,508	1,389	800	853	791
TOTAL, 1ST 30 INSTS.	66,699	64,689	64,487	21,353	21,573	21,077
31 RUTGERS THE ST UNIV OF NJ	1,539	1,581	1,532	369	312	328
32 UNIV OF CAL BERKELEY	1,521	1,563	1,620	552	626	622
33 UNIVERSITY OF COLORADO	1,445	1,503	1,291	394	415	298I
34 UNIVERSITY OF CONNECTICUT	1,416	1,350	1,247	375	392	337
35 UNIVERSITY OF KANSAS	1,410I	1,385I	1,323	355I	355I	340I
36 TEMPLE UNIVERSITY	1,388I	1,406I	1,222I	274I	278I	259I
37 INDIANA UNIVERSITY	1,379	1,379	446	285	285	125
38 UNIV OF SOUTHERN CAL	1,368	1,368	1,578	214	214	445E
39 CASE WESTERN RESERVE UNIV	1,351	1,380	1,367	397	394	493
40 UNIVERSITY OF CHICAGO	1,336	1,344	1,329	629	687	664I
TOTAL, 1ST 40 INSTS.	80,853	78,950	77,442	25,198	25,534	24,991
41 UNIV OF ILL URBANA	1,313	1,140	1,088	580	450	415
42 WAYNE STATE UNIVERSITY	1,293	1,221	1,133	226	210	208
43 CUNY MT SINAI SCH OF MED	1,260I	1,191I	1,131I	411I	398I	379I
44 UNIV OF MD COLLEGE PARK	1,257	1,200	1,335	295	281	157
45 UNIV OF CAL DAVIS	1,227	1,176	1,342	439	413	493
46 NORTHWESTERN UNIVERSITY	1,220	911	775	305	291	219
47 UNIV OF NC AT CHAPEL HILL	1,207	1,205	1,286	163	136	215
48 UNIV OF MISSOURI COLUMBIA	1,195	1,140	1,165	356	326	398
49 UNIVERSITY OF ROCHESTER	1,147	1,088	1,044	513	419	614
50 UNIV ALABAMA BIRMINGHAM	1,131	1,065	1,030	265	266	252
TOTAL, 1ST 50 INSTS.	93,105	90,287	88,771	28,752	28,725	28,342

SEE FOOTNOTES AT END OF TABLE.

TABLE B-26. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES: JANUARY 1979 - JANUARY 1981 - CONTINUED

INSTITUTIONAL RANKING	TOTAL FTE			R&D FTE		
	1981	1980	1979	1981	1980	1979
51 GEORGIA INSTITUTE OF TECH	1,124	1,214	816	506	670	423
52 STANFORD UNIVERSITY	1,119	1,119	1,795	545	545	1,095
53 UNIV OF HAWAII-MANOA	1,118	1,093	1,117	347	342	345
54 HOWARD UNIVERSITY	1,116I	1,038I	1,039E	555I	518I	519E
55 VA POLYTECH INST & ST U	1,109	1,102	1,033	249	290	363
56 OREGON STATE UNIVERSITY	1,105	1,072	1,072	611	570	570
57 UNIVERSITY OF GEORGIA	1,102	1,076	1,090	512	504	505
58 UNIVERSITY OF MIAMI	1,098	1,085	1,085	355E	361	361
59 NEW MEXICO STATE UNIV	1,096	828	828E	455	326	326E
60 KANS ST U - AG & APP SCI	1,063	1,036	978	397	371	275
TOTAL, 1ST 60 INSTS.	104,158	100,951	99,624	33,288	33,224	33,125
61 COLORADO STATE UNIVERSITY	1,061	1,063	695	360	378	372
62 WEST VIRGINIA UNIVERSITY	1,054	1,130	1,104	93	78	96
63 VIRGINIA COMMONWLTH UNIV	1,052	846	835	242	52	66
64 UNIV OF SOUTH CAROLINA	1,050	998	780	87	24	77I
65 UNIVERSITY OF CINCINNATI	1,040	1,019	841	174	217I	178
66 UNIVERSITY OF NEW MEXICO	1,033	1,023	880	392	373	299
67 BOSTON UNIVERSITY	1,010	1,026	1,026E	265	475	475E
68 SUNY AT STONY BROOK	994	922	781	343	301	208
69 SUNY AT BUFFALO	990I	972E	972E	336I	339I	340E
70 YESHIVA UNIVERSITY	988	958	935	374	352	331
TOTAL, 1ST 70 INSTS.	114,435	110,909	108,473	35,958	35,814	35,568
71 AUBURN UNIVERSITY	950	973	936	221	222	217
72 U TEX HLTH SCI CTR HOUSTN	944I	927	898	486I	481	423
73 U TENNESSEE KNOXVILLE	934	924	855	108	177	115
74 CLEMSON UNIVERSITY	888	847	847	208	176	176
75 UNIV OF NEBRASKA-LINCOLN	887	890	961	450	445	465
76 UNIV OF CAL SAN DIEGO	885	927	1,005	336	413	495
77 UNIVERSITY OF VIRGINIA	867	906	859I	145	111	218I
78 UNIV OF CAL SAN FRANCISCO	861	905	1,148	326	377	455
79 U TEX HLTH SCI CTR DALLAS	855	810	738	301	287	288
80 GEORGE WASHINGTON UNIV	854	867	776	212	231	214
TOTAL, 1ST 80 INSTS.	123,361	119,885	117,496	38,752	38,734	38,634
81 GEORGETOWN UNIVERSITY	850	822	641	226	220	283
82 COL OF MED & DENT OF N J	848	848	545	164	164	55
83 U TEX HLTH SCI CTR S ANTO	841	852I	815	482	471I	451
84 EMORY UNIVERSITY	833I	788I	738I	281I	271I	252I
85 UNIV OF TEX CANCER CENTER	826I	813I	726	708I	702I	632
86 SOUTHERN ILL U-CARBONDALE	815	746	675	139	100	58
87 UNIV OF MASS AT AMHERST	812	817	832	73	86	83
88 UNIV OF ILL MED CTR CHGO	784	1,157	1,108	222	278	258
89 BAYLOR COL OF MEDICINE	784	766	684I	359	351	249I
90 VANDERBILT UNIVERSITY	783	640	555	343	207	133
TOTAL, 1ST 90 INSTS.	131,539	128,166	124,815	41,751	41,585	41,090
91 CMTY COL ALLEGHENY COUNTY	780I	721I	-	0I	0I	-
92 UNIV OF OKLA HLTH SCI CTR	776	661	596	78	333	27[illegible]
93 UNIV OF MD BALT PROF SCH	753	802	777	139	152	143
94 NEW YORK MEDICAL COLLEGE	746	590I	578	268	303I	297
95 SUNY DOWNSTATE MED CTR	741I	729	711	144I	140	130
96 MED UNIV OF SO CAROLINA	729	785	702	68	93	60
97 ARIZONA STATE UNIVERSITY	708	705I	641	112	52I	28I
98 U OF ARKANSAS MED SCI CAM	689	702	686	58	33	89
99 OKLAHOMA STATE UNIVERSITY	684	734I	701	188	221I	211I
100 WASHINGTON STATE UNIV	675	1,219I	1,161I	216	309I	296I
TOTAL, 1ST 100 INSTS.	138,823	135,818	131,368	43,026	43,223	42,634
TOTAL, ALL OTHER INSTS.	148,465	145,517	55,176	14,135	13,170	11,798

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-27. — ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	24,988	24,476	20,862	20,468	4,126	4,008	22,121	21,825
1 JOHNS HOPKINS UNIVERSITY	934	932	922	920	12	12	926	924
2 MASS INST OF TECHNOLOGY	753	922	683	782	70	140	719	854
3 GEORGIA INSTITUTE OF TECH	732	814	691	727	41	87	705	751
4 PENNSYLVANIA STATE UNIV	621	598	602	579	19	19	603	580
5 PURDUE UNIVERSITY	538	537	448	456	90	81	486	486
6 UNIVERSITY OF MICHIGAN	485	454	388	376	97	78	445	424
7 UNIV OF CAL BERKELEY	481	537	284	288	197	249	346	371
8 UNIV OF ILL URBANA	423	419	387	371	36	48	208	203
9 TEXAS A & M UNIVERSITY	397	375	397	375	0	0	397	375
10 STANFORD UNIVERSITY	389	389	294	294	95	95	297	297
TOTAL, 1ST 10 INSTS.	5,753	5,977	5,096	5,168	657	809	5,133	5,265
11 UNIV OF CAL LOS ANGELES	366	324	149	147	217	177	221	210
12 UNIV OF WIS-MADISON	359	340	294	294	65	46	329	318
13 IOWA ST U OF SCI & TECH	358	340	329	326	29	14	345	338
14 OHIO STATE UNIVERSITY	334	347	254	306	80	41	317I	328
15 VA POLYTECH INST & ST U	331	324	328	319	3	5	327	322
16 N C STATE UNIV AT RALEIGH	300	302	275	266	25	36	283	281
17 UNIVERSITY OF WASHINGTON	298	306	261	271	37	35	281	288
18 CORNELL UNIVERSITY	296	297	289	288	7	9	295I	295I
19 UNIV OF TEXAS AT AUSTIN	291	308	250	267	41	41	267	282
20 U TENNESSEE KNOXVILLE	280	266	238	232	42	34	253	248
TOTAL, 1ST 20 INSTS.	8,966	9,131	7,763	7,884	1,203	1,247	8,054	8,177
21 UNIVERSITY OF MINNESOTA	247	249	196	191	51	58	206	208
22 UNIVERSITY OF CINCINNATI	245	207	123	114	122	93	152	139
23 UNIVERSITY OF FLORIDA	235	231	225	221	10	10	229	225
24 UNIVERSITY OF NEW MEXICO	225	213	149	138	76	75	176	166
25 UNIVERSITY OF KENTUCKY	222	195	179	162	43	33	192	170
26 CARNEGIE-MELLON UNIV	220I	207	175I	168	45I	39	192I	181
27 UNIV OF MD COLLEGE PARK	218	231	175	163	43	68	181	178
28 RENSSELAER POLYTECH INST	216	212	201	194	15	18	206	200
29 POLYTECHNIC INST OF N Y	210	190	126	140	84	50	144	156
30 N J INST OF TECHNOLOGY	204	205	130	134	74	71	150	152
TOTAL, 1ST 30 INSTS.	11,208	11,271	9,442	9,509	1,766	1,762	9,885	9,952
31 U OF HOUSTON CENTRAL CAM	201	188	126	84	75	104	149	188I
32 UNIV OF MISSOURI ROLLA	201	189	189	188	12	1	189	189
33 UNIVERSITY OF UTAH	191	170	147	137	44	33	163	155
34 NORTHWESTERN UNIVERSITY	191	146	156	135	35	11	173	141
35 NEW MEXICO STATE UNIV	189	148	170	139	19	9	178	144
36 UNIVERSITY OF ARIZONA	186	152	177	142	9	10	180	146
37 GEORGE WASHINGTON UNIV	184	185	74	69	110	116	114	128
38 AUBURN UNIVERSITY	182	180	178	173	4	7	180	177
39 UNIV OF CAL DAVIS	182	196	106	108	76	88	126	133
40 COLORADO STATE UNIVERSITY	178	205	170	196	8	9	176	200
TOTAL, 1ST 40 INSTS.	13,093	13,030	10,935	10,880	2,158	2,150	11,516	11,553
41 UNIVERSITY OF KANSAS	176I	173I	147I	145I	29I	28I	164I	161I
42 ARIZONA STATE UNIVERSITY	174	142	161	138	13	4	166	138I
43 UNIVERSITY OF PITTSBURGH	172	178	153	157	19	21	160I	166
44 UNIVERSITY OF DAYTON	172	170	128	118	44	52	142	132
45 LOUISIANA STATE UNIV	162	156	145	134	17	22	149	141
46 CLEMSON UNIVERSITY	162	136	161	136	1	0	162	136
47 MICHIGAN TECH UNIVERSITY	158	156	153	156	5	0	155	1[illegible]
48 WASHINGTON STATE UNIV	158I	155I	122I	120I	36I	35I	93	142I
49 ILLINOIS INST OF TECH	155	93	75	77	80	16	101	82
50 UNIV OF MASS AT AMHERST	154	144	147	138	7	6	14[illegible]	140
TOTAL, 1ST 50 INSTS.	14,736	14,533	12,327	12,199	2,409	2,334	12,959	12,948

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 KANS ST U - AG & APP SCI	153	159	125	124	28	35	141	146
52 UNIVERSITY OF COLORADO	151	152	137	125	14	27	141	137
53 UNIV OF SOUTHERN CAL	148	148	128	128	20	20	133	133
54 CALIFORNIA INST OF TECH	146	134	142	129	4	5	144	132
55 UNIV OF NEBRASKA-LINCOLN	146	144	144	142	2	2	145	143
56 TEXAS TECH UNIVERSITY	144	141	126	95	18	46	129	128
57 UNIVERSITY OF CONNECTICUT	142	146	121	118	21	28	131	133
58 NORTHEASTERN UNIVERSITY	141	177	116	97	25	80	124	116
59 COLUMBIA UNIV MAIN DIV	140	137	112	112	28	25	122	122I
60 MISSISSIPPI STATE UNIV	138	143	137	141	1	2	137	141
TOTAL, 1ST 60 INSTS.	16,185	16,014	13,615	13,410	2,570	2,604	14,308	14,279
61 MICHIGAN STATE UNIVERSITY	134	134	121	120	13	14	128	129
62 OREGON STATE UNIVERSITY	132	143	123	121	9	22	128	129
63 OKLAHOMA STATE UNIVERSITY	130	191I	126	176I	4	15I	127	187I
64 UNIV OF PENNSYLVANIA	128	104	94	82	34	22	105	88
65 THE UNIVERSITY OF ALABAMA	124	117I	113	105I	11	12I	116	109I
66 DREXEL UNIVERSITY	124	113	90	83	34	30	99	95
67 WAYNE STATE UNIVERSITY	120	111	76	80	44	31	99	95
68 UNIVERSITY OF VIRGINIA	120	116	120	116	0	0	120	116
69 WEST VIRGINIA UNIVERSITY	118	126	103	112	15	14	110	119
70 LEHIGH UNIVERSITY	117	121	106	104	11	17	109	109
TOTAL, 1ST 70 INSTS.	17,432	17,29[illegible]	14,687	14,509	2,745	2,781	15,453	15,456
71 CASE WESTERN RESERVE UNIV	115	105	115	105	0	0	115	105
72 RUTGERS THE ST UNIV OF NJ	112	111	110	107	2	4	110	108
73 UNIV OF MISSOURI COLUMBIA	111	122	106	119	5	3	108	120
74 UNIVERSITY OF DELAWARE	107	116	101	105	6	11	103	110
75 UTAH STATE UNIVERSITY	107	103	103	102	4	1	103	102
76 SUNY AT BUFFALO	105I	103E	85I	84E	20I	19E	91I	90E
77 EMORY UNIVERSITY	103I	98I	90I	86I	13I	12I	90I	86I
78 SAN DIEGO STATE UNIV	103	83	47	36	56	47	56	46
79 STEVENS INSTITUTE OF TECH	102	102	74	74	28	28	83	83
80 PRINCETON UNIVERSITY	101	96	96	94	5	2	99	96
TOTAL, 1ST 80 INSTS.	18,498	18,329	15,614	15,421	2,884	2,908	16,415	16,402
81 UNIVERSITY OF IDAHO	100	90	97	89	3	1	98	90
82 UNIV OF TEX AT ARLINGTON	100	104	59	64	41	40	72	73
83 UNIV OF WIS-MILWAUKEE	100	101	74	74	26	27	83	84
84 SOUTHERN ILL U-CARBONDALE	99	91	94	88	5	3	95	89
85 UNIVERSITY OF TOLEDO	96	87	64	61	32	26	74	67
86 WORCESTER POLY INSTITUTE	95	98	88	80	7	18	90	88
87 UNIV OF P R-MAYAGUEZ	95I	94I	85I	84I	10I	10I	91I	91I
88 UNIV OF ILL CHICAGO CIR	92	90	81	76	11	14	81	73
89 INDIANA UNIVERSITY	91	91	44	44	47	47	55	55
90 WASHINGTON UNIVERSITY	91	87	70	72	21	15	77	79
TOTAL, 1ST 90 INSTS.	19,457	19,262	16,370	16,153	3,087	3,109	17,234	17,191
91 US NAVAL POSTGRAD SCHOOL	91	89	91	89	0	0	91	89
92 UNIVERSITY OF LOWELL	91	82	76	76	15	6	82	78
93 MONTANA STATE UNIVERSITY	90	51I	78	47I	12	4I	85I	49I
94 BRIGHAM YOUNG UNIVERSITY	88	84	84	80	4	4	84	80
95 CLARKSON COLLEGE OF TECH	88	77	76	69	12	8	80	71
96 UNIVERSITY OF NOTRE DAME	86	77	81	72	5	5	83	74
97 UNIV OF OKLAHOMA NORMAN	85	74	81	71	4	3	82	72
98 SYRACUSE UNIVERSITY	84	108	80	92	4	16	82	100
99 HOWARD UNIVERSITY	84I	78	44I	42	40I	36	54I	51I
100 COLORADO SCHOOL OF MINES	82	77	60	68	22	9	71	73
TOTAL, 1ST 100 INSTS.	20,326	20,059	17,121	16,859	3,205	3,200	18,032	17,928
TOTAL, ALL OTHER INSTS.	4,662	4,417	3,741	3,609	921	808	4,088	3,896

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-28. — PHYSICAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	19,476	19,194	16,937	16,749	2,539	2,445	17,825	17,694
1 MASS INST OF TECHNOLOGY	520	484	494	458	26	26	508	472
2 UNIV OF TEXAS AT AUSTIN	449	435	405	389	44	46	429	418
3 UNIV OF CAL BERKELEY	428	496	183	178	245	318	291	313
4 UNIV OF CAL LOS ANGELES	387	374	142	130	245	244	221	205
5 JOHNS HOPKINS UNIVERSITY	368	356	365	353	3	3	367	355
6 UNIV OF MD COLLEGE PARK	356	324	313	277	43	47	340	331
7 UNIV OF WIS-MADISON	311	298	279	268	32	30	298	285
8 UNIV OF ILL URBANA	311	297	287	266	24	31	155	138
9 UNIVERSITY OF MICHIGAN	269	294	241	275	28	19	256	282
10 HOWARD UNIVERSITY	249I	230	142I	136	107I	94	190I	175
TOTAL, 1ST 10 INSTS.	3,648	3,588	2,851	2,730	797	858	3,057	2,976
11 PURDUE UNIVERSITY	239	227	219	212	20	15	225	217
12 CALIFORNIA INST OF TECH	237	271	236	270	1	1	237	271
13 UNIVERSITY OF ARIZONA	236	240	226	224	10	16	231	231
14 CORNELL UNIVERSITY	226	241	218	234	8	7	220I	234I
15 HARVARD UNIVERSITY	222	247	184	208	38	39	214	238
16 UNIVERSITY OF ROCHESTER	218	196	198	179	20	17	202	183
17 PENNSYLVANIA STATE UNIV	208	192	193	180	15	12	197	183
18 UNIVERSITY OF CHICAGO	201	212	193	201	8	11	197	207
19 SUNY AT STONY BROOK	199	167	189	162	10	5	192	163
20 UNIVERSITY OF COLORADO	196	255	193	231	3	24	195	242
TOTAL, 1ST 20 INSTS.	5,830	5,836	4,900	4,831	930	1,005	5,168	5,145
21 MICHIGAN STATE UNIVERSITY	194	184	191	180	3	4	192	180
22 RUTGERS THE ST UNIV OF NJ	188	183	176	169	12	14	180	173
23 STANFORD UNIVERSITY	182	182	153	153	29	29	154	154
24 GEORGIA INSTITUTE OF TECH	181	194	178	186	3	8	180	187
25 UNIVERSITY OF MINNESOTA	176	179	164	158	12	21	163	161
26 UNIVERSITY OF PITTSBURGH	170	182	155	167	15	15	161I	173
27 UNIVERSITY OF WASHINGTON	166	151	130	124	36	27	151	142
28 OHIO STATE UNIVERSITY	162	179	115	159	47	20	152I	168
29 INDIANA UNIVERSITY	162	162	144	144	18	18	150	150
30 UNIVERSITY OF UTAH	158	159	138	130	20	29	146	145
TOTAL, 1ST 30 INSTS.	7,569	7,591	6,444	6,401	1,125	1,190	6,799	6,779
31 YALE UNIVERSITY	155	161	143	143	12	18	149	152
32 CARNEGIE-MELLON UNIV	152I	146	145I	139	7I	7	147I	142
33 PRINCETON UNIVERSITY	150	137	137	132	13	5	144	135
34 UNIV OF CAL SAN DIEGO	140	176	119	153	21	23	114	146
35 COLUMBIA UNIV MAIN DIV	140	149	128	137	12	12	132	149I
36 LOUISIANA STATE UNIV	134	136	129	132	5	4	131	136
37 U TENNESSEE KNOXVILLE	133	123	114	104	19	19	120	110
38 NORTHWESTERN UNIVERSITY	129	137	124	132	5	5	130	134
39 UNIVERSITY OF KANSAS	129I	127I	110I	109I	19I	18I	122I	120I
40 UNIVERSITY OF KENTUCKY	124	137	103	128	21	9	109	131
TOTAL, 1ST 40 INSTS.	8,955	9,020	7,696	7,710	1,259	1,310	8,099	8,135
41 UNIVERSITY OF DAYTON	122	107	108	100	14	7	113	102
42 FLORIDA STATE UNIVERSITY	118	95	107	85	11	10	115	94
43 WASHINGTON STATE UNIV	113I	112I	90I	89I	23I	23I	52	106I
44 UNIV OF CAL SANTA BARBARA	112	94	70	63	42	31	92	80
45 UNIVERSITY OF NOTRE DAME	108	112	104	107	4	5	106	110
46 WAYNE STATE UNIVERSITY	104	96	75	86	2*	10	86	90
47 UNIV OF MASS AT AMHERST	104	117	99	104	7	13	102	113
48 UNIV OF PENNSYLVANIA	101	90	84	68	17	22	90	75
49 UNIV OF CAL DAVIS	101	94	61	58	40	36	79	72
50 NEW MEXICO STATE UNIV	101	76	97	72	4	4	99	75
TOTAL, 1ST 50 INSTS.	10,039	10,013	8,591	8,542	1,448	1,471	9,035	9,053

SEE FOOTNOTES AT END OF TABLE.

TABLE B-28. — PHYSICAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981 - CONTINUED

INSTITUTIONAL RANKING		TOTAL		FULL TIME		PART TIME		TOTAL FTE	
		1981	1980	1981	1980	1981	1980	1981	1980
51	TEXAS A & M UNIVERSITY	100	98	100	98	0	0	100	98
52	N C STATE UNIV AT RALEIGH	97	71	92	70	5	1	94	71
53	UNIV OF SOUTH CAROLINA	96	97	91	90	5	7	90	91
54	UNIVERSITY OF DELAWARE	96	110E	93	103E	3	7	94	106E
55	UNIV OF CAL IRVINE	96	90	83	76	13	14	84	79
56	UNIV OF SOUTHERN CAL	95	95	85	85	10	10	88	88
57	OREGON STATE UNIVERSITY	93	100	89	91	4	9	87	92
58	UNIVERSITY OF IOWA	92	100	92	99	0	1	92	100
59	SUNY AT BUFFALO	89I	88E	82I	81E	7I	7E	86I	86E
60	UNIVERSITY OF FLORIDA	88	74	87	73	1	1	87	74
	TOTAL, 1ST 60 INSTS.	10,981	10,936	9,485	9,408	1,496	1,528	9,941	9,939
61	EMORY UNIVERSITY	88I	84I	81I	78I	7I	6I	85I	81I
62	RICE UNIVERSITY	88	98	84	9R	4	0	86	98
63	UNIV OF HAWAII-MANOA	86	86	83	81	3	5	84	84
64	KENT STATE UNIVERSITY	85	80	72	77	13	3	73	79
65	NEW YORK UNIVERSITY	85	82	75	73	10	12	77	73
66	UNIV OF ILL CHICAGO CIR	84	77	69	71	15	6	75	72
67	RENSSELAER POLYTECH INST	83	88	74	79	9	9	78	82
68	DUKE UNIVERSITY	83	78	72	56	11	22	77	61
69	BOSTON UNIVERSITY	82	88	80	82	2	6	81	84
70	UNIV OF P R-RIO PIEDRAS	82I	80I	74I	72I	8I	8I	75I	73I
	TOTAL, 1ST 70 INSTS.	11,827	11,777	10,249	10,172	1,578	1,605	10,733	10,727
71	AUBURN UNIVERSITY	82	71	68	65	14	6	75	68
72	SUNY AT ALBANY	81	65	70	58	11	7	75	62
73	SAN DIEGO STATE UNIV	79	59	58	52	21	7	56	58
74	CASE WESTERN RESERVE UNIV	79	82	79	82	0	0	79	82
75	UNIVERSITY OF NEW MEXICO	77	60	54	44	23	16	64	52
76	VA POLYTECH INST & ST U	76	85	76	85	0	0	76	85
77	UNIVERSITY OF GEORGIA	76	78	76	77	0	1	76	77
78	UNIV OF TEX CANCER CENTER	76I	75I	66I	65I	10I	10I	67I	66I
79	BROWN UNIVERSITY	74	68	71	64	3	4	73	66
80	UNIVERSITY OF OREGON MAIN	74	73	43	41	31	32	53	51
	TOTAL, 1ST 80 INSTS.	12,601	12,493	10,910	10,805	1,691	1,688	11,429	11,395
81	UNIV OF NC AT CHAPEL HILL	73	79	73	77	0	2	73	78
82	FAIRLEIGH DICKINSON UNIV	73	80I	39	39I	34	41I	51	57I
83	UNIV OF WIS-MILWAUKEE	72	71	54	56	18	15	60	62
84	UNIV OF NEBRASKA-LINCOLN	71	74	68	71	3	3	70	72
85	U OF HOUSTON CENTRAL CAM	70	105	58	46	12	59	63	93I
86	IOWA ST U OF SCI & TECH	70	85	64	78	6	7	76	89
87	CLEMSON UNIVERSITY	70	64	70	64	0	0	70	64
88	UNIVERSITY OF CONNECTICUT	69	65	66	60	3	5	64	63
89	UNIV OF TEXAS AT DALLAS	67	65	50	54	17	11	54	55
90	ARIZONA STATE UNIVERSITY	66	82	63	77	3	5	64	79
	TOTAL, 1ST 90 INSTS.	13,302	13,263	11,515	11,427	1,787	1,836	12,077	12,108
91	UNIVERSITY OF CINCINNATI	66	70	65	68	1	2	65	68
92	OLD DOMINION UNIVERSITY	65	60	30	30	35	30	31	36
93	MONTANA STATE UNIVERSITY	65	39I	51	35I	14	4I	59I	36I
94	OREGON GRADUATE CENTER	64I	62I	64I	62I	0I	0I	64I	62I
95	NORTHEASTERN UNIVERSITY	64	70	60	68	4	2	62	70
96	UNIVERSITY OF VIRGINIA	63	77	63	77	0	0	63	77
97	WASHINGTON UNIVERSITY	63	61	58	57	5	4	60	59
98	GEORGE WASHINGTON UNIV	62	54	34	33	28	21	46	42
99	COLORADO STATE UNIVERSITY	62	61	61	60	1	1	68	61
100	OHIO UNIVERSITY	62	59I	56	58I	6	1I	59	58I
	TOTAL, 1ST 100 INSTS.	13,938	13,876	12,057	11,975	1,881	1,901	12,656	12,677
	TOTAL, ALL OTHER INSTS.	5,538	5,318	4,880	4,774	658	544	5,169	5,017

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. — ENVIRONMENTAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	6,921	6,733	6,136	5,913	785	820	6,358	6,211
1 UNIV OF WIS-MADISON	239	237	202	207	37	30	222	225
2 UNIV OF CAL SAN DIEGO	220	217	189	182	31	35	172	169
3 COLUMBIA UNIV MAIN DIV	199	202	192	192	7	10	194	195I
4 UNIV OF TEXAS AT AUSTIN	197	206	188	201	9	5	192	200
5 UNIVERSITY OF WASHINGTON	188	186	156	160	32	26	172	176
6 UNIV OF ILL URBANA	164	108	122	74	42	34	96	52
7 LOUISIANA STATE UNIV	161	158	143	140	18	18	151	149
8 OREGON STATE UNIVERSITY	142	125	134	120	8	5	135	122
9 MASS INST OF TECHNOLOGY	130	100	113	89	17	11	122	96
10 COLLEGE OF WILLIAM & MARY	125	125	125	124	0	1	125	125
TOTAL, 1ST 10 INSTS.	1,765	1,664	1,564	1,489	201	175	1,581	1,509
11 UNIVERSITY OF ARIZONA	121	117	111	104	10	13	115	110
12 HOWARD UNIVERSITY	97I	90	48I	46	49I	44	63I	58
13 UNIVERSITY OF MIAMI	94	97	94	95	0	2	94	95
14 PENNSYLVANIA STATE UNIV	91	90	80	81	11	9	85	84
15 UNIV OF HAWAII-MANOA	90	87	87	80	3	7	88	84
16 WOODS HOLE OCNGRPHIC INST	87	87	82	84	5	3	92	86
17 UNIVERSITY OF WYOMING	86	43	69	38	17	5	77	40
18 UNIV OF CAL LOS ANGELES	81	102	44	49	37	53	51	61
19 UNIVERSITY OF MICHIGAN	79	104	69	92	10	12	73	98
20 UNIV OF ALASKA FAIRBANKS	77	78	75	76	2	2	76	77
TOTAL, 1ST 20 INSTS.	2,668	2,559	2,323	2,234	345	325	2,398	2,304
21 UNIVERSITY OF COLORADO	76	96	76	89	0	7	76	93
22 UNIVERSITY OF KENTUCKY	73	62	69	59	4	3	70	60
23 UNIVERSITY OF DELAWARE	72	68	71	67	1	1	71	68
24 TEXAS A & M UNIVERSITY	72	78	72	78	0	0	72	78
25 CALIFORNIA INST OF TECH	69	22	68	18	1	4	69	20
26 SUNY AT ALBANY	69	73	62	60	7	13	65	65
27 FLORIDA STATE UNIVERSITY	68	55	64	53	4	2	65	55
28 COLORADO STATE UNIVERSITY	66	74	65	70	1	4	69	73
29 UNIVERSITY OF MINNESOTA	63	61	62	58	1	3	62	61
30 UNIVERSITY OF UTAH	62	111	54	84	8	27	51	97
TOTAL, 1ST 30 INSTS.	3,358	3,259	2,986	2,870	372	389	3,070	2,974
31 UNIVERSITY OF GEORGIA	60	48	57	48	3	0	59	48
32 STANFORD UNIVERSITY	57	57	41	41	16	16	37	37
33 OHIO STATE UNIVERSITY	55	46	42	33	13	13	49I	40
34 UNIVERSITY OF KANSAS	55I	54I	49I	48I	6I	6I	53I	52I
35 RUTGERS THE ST UNIV OF NJ	54	57	52	54	2	3	53	55
36 SUNY AT STONY BROOK	49	52	48	52	1	0	48	52
37 GEORGIA INSTITUTE OF TECH	48	19	43	18	5	1	45	18
38 WASHINGTON STATE UNIV	48I	48I	40I	40I	8I	8I	13	46I
39 UNIV OF CAL RIVERSIDE	48	49	38	39	10	10	33	33
40 UNIV OF WIS-MILWAUKEE	47	45	40	40	7	5	45	43
TOTAL, 1ST 40 INSTS.	3,879	3,734	3,436	3,283	443	451	3,506	3,399
41 PRINCETON UNIVERSITY	45	38	42	34	3	4	44	35
42 INDIANA UNIVERSITY	45	45	41	41	4	4	43	43
43 UNIVERSITY OF CHICAGO	45	41	43	41	2	0	44	41
44 VA POLYTECH INST & ST U	44	47	43	47	1	0	43	47
45 ARIZONA STATE UNIVERSITY	43	40	33	25	10	15	37	32
46 HARVARD UNIVERSITY	42	49	42	46	0	3	42	48
47 UNIV OF RHODE ISLAND	42	42	42	42	0	0	42I	42
48 UNIV OF SOUTH FLORIDA	41	30I	36	28I	5	2I	37	28I
49 UNIVERSITY OF NEW MEXICO	41	52	26	31	15	21	3[illegible]	41
50 N MEX INST MINING & TECH	40	38	40	36	0	2	40	37
TOTAL, 1ST 50 INSTS.	4,307	4,156	3,824	3,654	483	502	3,911	3,794

SEE FOOTNOTES AT END OF TABLE.

TABLE B-29. — ENVIRONMENTAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 UTAH STATE UNIVERSITY	39	31	38	30	1	1	38	31
52 UNIV OF TEXAS AT DALLAS	39	42	26	34	13	8	29	40
53 UNIVERSITY OF CONNECTICUT	37	30	33	29	4	1	33	30
54 OLD DOMINION UNIVERSITY	37	32	26	22	11	10	26	24
55 UNIV OF CAL SANTA BARBARA	37	42	23	27	14	15	29	34
56 COLORADO SCHOOL OF MINES	36	36	29	30	7	6	32	39
57 NORTHERN ILLINOIS UNIV	36	34	32	33	4	1	33	34
58 MICHIGAN STATE UNIVERSITY	35	35	35	35	0	0	35	35
59 BOSTON COLLEGE	34	39I	30	34I	4	5I	32	36I
60 UNIV OF SOUTH CAROLINA	34	41	32	39	2	2	37	39
TOTAL, 1ST 60 INSTS.	4,671	4,518	4,128	3,967	543	551	4,238	4,138
61 UNIV OF NEVADA - RENO	33	18	23	7	10	11	26	10
62 N C STATE UNIV AT RALEIGH	32	34	30	32	2	2	31	33
63 OKLAHOMA STATE UNIVERSITY	32	13I	29	13I	3	0I	29	13I
64 UNIV OF MAINE ORONO	32	38	30	32	2	6	32	34
65 DESERT RESEARCH INSTITUTE	32	30	31	30	1	0	32	30
66 NORTH DAKOTA STATE UNIV	32	29	32	29	0	0	32	29
67 UNIV OF MASS AT AMHERST	32	33	30	32	2	1	31	33
68 FLORIDA INST OF TECH	31	33	28	29	3	4	33	33
69 UNIV OF CAL BERKELEY	30	35	28	27	2	8	28	30
70 UNIV OF CAL SANTA CRUZ	30	33	18	18	12	15	23	25
TOTAL, 1ST 70 INSTS.	4,987	4,814	4,407	4,216	580	598	4,537	4,408
71 CORNELL UNIVERSITY	30	24	28	22	2	2	30I	24I
72 UNIVERSITY OF VIRGINIA	28	25	28	25	0	0	28	25
73 YALE UNIVERSITY	28	31	26	31	2	0	27	31
74 ILLINOIS STATE UNIVERSITY	28	4	28	4	0	0	28	4
75 UNIVERSITY OF AKRON	27	14	18	9	9	5	21	10
76 PURDUE UNIVERSITY	27	26	26	24	1	2	26	25
77 UNIV OF MISSOURI COLUMBIA	27	22	26	22	1	0	26	22
78 UNIV OF OKLAHOMA NORMAN	27	36	26	34	1	2	26	35
79 MIAMI UNIVERSITY (OHIO)	27	27	27	25	0	2	27	26
80 UNIV OF NEBRASKA-LINCOLN	26	27	26	27	0	0	26	27
TOTAL, 1ST 80 INSTS.	5,262	5,050	4,666	4,439	596	611	4,804	4,637
81 UNIVERSITY OF IDAHO	25	24	21	21	4	3	23	23
82 BROWN UNIVERSITY	25	26	24	25	1	1	25	25
83 U OF HOUSTON CENTRAL CAM	23	27	20	13	3	14	20	23I
84 UNIV OF MD COLLEGE PARK	23	20	23	18	0	2	26	16
85 US NAVAL POSTGRAD SCHOOL	23	22	23	22	0	0	23	22
86 UNIV OF ILL CHICAGO CIR	23	21	20	19	3	2	21	20
87 DUKE UNIVERSITY	23	24	22	22	1	2	22	22
88 OHIO UNIVERSITY	23	10I	19	10I	4	0I	20	10I
89 JOHNS HOPKINS UNIVERSITY	22	23	21	22	1	1	22	23
90 LONG ISLAND UNIVERSITY	22	8	16	7	6	1	20	10
TOTAL, 1ST 90 INSTS.	5,494	5,255	4,875	4,618	619	637	5,027	4,832
91 UNIV OF NC AT CHAPEL HILL	21	20	21	20	0	0	21	20
92 RICE UNIVERSITY	21	29	20	28	1	1	20	29
93 BRIGHAM YOUNG UNIVERSITY	21	13	21	13	0	0	21	13
94 NEW MEXICO STATE UNIV	21	12	20	10	1	2	20	12
95 UNIVERSITY OF OREGON MAIN	21	23	14	13	7	10	16	17
96 WASHINGTON UNIVERSITY	20	23	17	20	3	3	18	23
97 UNIVERSITY OF PITTSBURGH	20	20	17	17	3	3	18I	18
98 UNIVERSITY OF N DAKOTA	20I	20	20I	20	0I	0	20I	20
99 UNIV OF NEW HAMPSHIRE	20	25	18	24	2	1	19	25
100 SOUTHERN ILL U-CARBONDALE	20	19	18	18	2	1	18	19
TOTAL, 1ST 100 INSTS.	5,699	5,459	5,061	4,801	638	658	5,219	5,028
TOTAL, ALL OTHER INSTS.	1,222	1,274	1,075	1,112	147	162	1,138	1,183

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. — MATHEMATICAL/COMPUTER SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	16,520	15,587	13,379	12,794	3,141	2,793	14,515	13,843
1 OHIO STATE UNIVERSITY	283	143	188	118	95	25	257I	130
2 RUTGERS THE ST UNIV OF NJ	239	246	230	238	9	8	233	240
3 PURDUE UNIVERSITY	234	229	174	167	60	62	197	191
4 PENNSYLVANIA STATE UNIV	234	240	185	190	49	50	204	210
5 UNIV OF WIS-MADISON	220	221	193	191	27	30	206	207
6 UNIVERSITY OF KENTUCKY	208	212	152	158	56	54	170	175
7 JOHNS HOPKINS UNIVERSITY	200	212	197	207	3	5	200	211
8 UNIV OF ILL URBANA	196	206	183	185	13	21	92	96
9 UNIV OF CAL BERKELEY	194	194	82	76	112	118	131	129
10 UNIV OF TEXAS AT AUSTIN	193	160	179	151	14	9	184	156
TOTAL, 1ST 10 INSTS.	2,201	2,063	1,763	1,681	438	382	1,876	1,745
11 UNIV OF SOUTH CAROLINA	178	173	145	146	33	27	152	156
12 MASS INST OF TECHNOLOGY	177	138	169	134	8	4	174	137
13 UNIV OF MD COLLEGE PARK	169	165	140	139	29	26	155	154
14 NEW MEXICO STATE UNIV	169	121	157	111	12	10	164	117
15 BOSTON UNIVERSITY	166	174	41	34	125	140	82	81
16 N C STATE UNIV AT RALEIGH	165	159	130	129	35	30	138	139
17 UNIVERSITY OF MINNESOTA	162	145	148	131	14	14	156	139
18 NEW YORK UNIVERSITY	157	144	118	112	39	32	131	122
19 LOUISIANA STATE UNIV	154	146	124	124	30	22	136	131
20 IOWA ST U OF SCI & TECH	154	149	141	138	13	11	151	147
TOTAL, 1ST 20 INSTS.	3,852	3,577	3,076	2,879	776	698	3,317	3,068
21 UNIVERSITY OF PITTSBURGH	148	139	123	118	25	21	135I	127
22 MICHIGAN STATE UNIVERSITY	147	147	141	141	6	6	145	144
23 TEMPLE UNIVERSITY	137	141	97	92	40	49	129I	133I
24 U TENNESSEE KNOXVILLE	134	136	120	117	14	19	125	123
25 GEORGE WASHINGTON UNIV	130	118	68	58	62	60	93	88
26 BRIGHAM YOUNG UNIVERSITY	129	115	126	112	3	3	126	62
27 TEXAS A & M UNIVERSITY	127	118	127	118	0	0	127	118
28 UNIVERSITY OF MICHIGAN	124	129	116	119	8	10	119	119
29 GEORGIA INSTITUTE OF TECH	120	130	108	127	12	3	115	126
30 UNIV OF CAL LOS ANGELES	118	113	75	68	43	45	93	87
TOTAL, 1ST 30 INSTS.	5,166	4,863	4,177	3,949	989	914	4,526	4,196
31 STANFORD UNIVERSITY	117	117	92	92	25	25	85	85
32 NORTHWESTERN UNIVERSITY	116	70	112	64	4	6	114	67
33 FLORIDA STATE UNIVERSITY	116	121	102	111	14	10	110	118
34 VA POLYTECH INST & ST U	114	114	113	110	1	4	113	112
35 ARIZONA STATE UNIVERSITY	110	148	109	141	1	7	109	144
36 UNIV OF ILL CHICAGO CIR	110	104	96	88	14	16	102	91
37 UNIVERSITY OF KANSAS	109I	108I	93I	92I	16I	16I	99I	98I
38 AUBURN UNIVERSITY	104	88	89	78	15	10	94	84
39 WAYNE STATE UNIVERSITY	104	86	53	51	51	35	70	62
40 UNIVERSITY OF ARIZONA	102	85	97	78	5	7	99	80
TOTAL, 1ST 40 INSTS.	6,268	5,904	5,133	4,854	1,135	1,050	5,524	5,139
41 WASHINGTON STATE UNIV	99I	97I	76I	75I	23I	22I	41	90I
42 INDIANA UNIVERSITY	97	97	90	90	7	7	93	93
43 ILLINOIS STATE UNIVERSITY	97	84	79	70	18	14	67	76
44 OREGON STATE UNIVERSITY	96	110	74	80	22	30	87	93
45 NEW YORK INST TECHNOLOGY	96	53	38	25	58	28	57	36
46 SUNY AT STONY BROOK	95	96	84	84	11	12	86	87
47 UNIVERSITY OF UTAH	95	99	82	74	13	25	85	90
48 GEORGIA STATE UNIVERSITY	94	94	85	85	9	9	90	96
49 CARNEGIE-MELLON UNIV	94I	89	86I	82	8I	7	89I	85
50 UNIV OF PENNSYLVANIA	93	75	82	69	11	6	83	70
TOTAL, 1ST 50 INSTS.	7,224	6,798	5,909	5,588	1,315	1,210	6,306	5,956

SEE FOOTNOTES AT END OF TABLE.

TABLE B-30. — MATHEMATICAL/COMPUTER SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 NORTHEASTERN UNIVERSITY	92	115	52	46	40	69	64	67
52 PACE UNIVERSITY	91	64I	27	19I	64	45I	56	41I
53 UNIVERSITY OF DAYTON	89	53	69	45	20	8	75	47
54 UNIVERSITY OF CONNECTICUT	89	74	74	62	15	12	86	67
55 VIRGINIA COMMONWLTH UNIV	89	35	57	34	32	1	65	35
56 SUNY AT BUFFALO	86I	84E	86I	84E	0I	0	86I	84E
57 UNIVERSITY OF LOUISVILLE	86	81	53	51	33	30	66	63
58 CORNELL UNIVERSITY	85	81	74	78	11	3	83I	79I
59 UNIVERSITY OF NEW MEXICO	85	90	64	77	21	13	72	83
60 UNIVERSITY OF GEORGIA	83	79	70	70	13	9	75	74
TOTAL, 1ST 60 INSTS.	8,099	7,554	6,535	6,154	1,564	1,400	7,037	6,597
61 CLEMSON UNIVERSITY	83	85	76	79	7	6	79	83
62 NORTHERN ILLINOIS UNIV	82	75	70	68	12	7	66	71
63 SOUTHERN ILL U-CARBONDALE	82	72	80	71	2	1	81	72
64 FAIRLEIGH DICKINSON UNIV	81	62I	29	33I	52	29I	48	43I
65 UNIVERSITY OF WASHINGTON	81	78	77	69	4	9	78	74
66 COLORADO STATE UNIVERSITY	80	85	80	83	0	2	83	85
67 UNIV OF P R-RIO PIEDRAS	79I	78I	72I	71I	7I	7I	72I	71I
68 UNIVERSITY OF IOWA	79	75	74	64	5	11	76	68
69 MIAMI UNIVERSITY (OHIO)	78	71	50	58	28	13	64	65
70 WRIGHT STATE UNIVERSITY	78	69	49	43	29	26	57	49
TOTAL, 1ST 70 INSTS.	8,902	8,304	7,192	6,793	1,710	1,511	7,742	7,279
71 UNIVERSITY OF FLORIDA	77	74	69	68	8	6	72	71
72 UNIV OF MASS AT AMHERST	77	81	75	79	2	2	75	80
73 ILLINOIS INST OF TECH	77	39	26	24	51	15	42	29
74 U OF HOUSTON CENTRAL CAM	76	120	61	53	15	67	65	120I
75 BOWLING GREEN STATE UNIV	76	86	64	71	12	15	71	82
76 SAN DIEGO STATE UNIV	76	54	44	48	32	6	55	56
77 UNIVERSITY OF COLORADO	75	83	74	71	1	12	75	78
78 KANS ST U - AG & APP SCI	74	72	54	50	20	22	63	60
79 AMERICAN UNIVERSITY	74	103	29	30	45	73	45	58
80 UNIV OF SOUTH FLORIDA	74	49I	66	41I	8	8I	68	43I
TOTAL, 1ST 80 INSTS.	9,658	9,065	7,754	7,328	1,904	1,737	8,377	7,956
81 DE PAUL UNIVERSITY	73	65	29	25	44	40	44I	39
82 THE UNIVERSITY OF ALABAMA	73	62I	67	58I	6	4I	69	60I
83 UNIV OF WIS-MILWAUKEE	73	70	38	40	35	30	52	52
84 UNIV OF SOUTHWESTERN LA	72	52	67	48	5	4	70	51
85 HOFSTRA UNIVERSITY	72	55	43	34	29	21	54	42
86 WASHINGTON UNIVERSITY	71	66	62	57	9	9	65	60
87 MISSISSIPPI STATE UNIV	68	61	62	55	6	6	66	61
88 LONG ISLAND UNIVERSITY	68	37	44	20	24	17	54	31
89 UNIVERSITY OF CINCINNATI	66	57	56	52	10	5	59	55
90 WICHITA STATE UNIVERSITY	65	59	46	44	19	15	62	50
TOTAL, 1ST 90 INSTS.	10,359	9,649	8,268	7,761	2,091	1,888	8,974	8,457
91 UNIV OF TEX AT ARLINGTON	64	65	46	46	18	19	52	52
92 N J INST OF TECHNOLOGY	64	51	36	37	28	14	44	42
93 HARVARD UNIVERSITY	64	64	58	54	6	10	60	60
94 WESTERN MICHIGAN UNIV	63	54	48	44	15	10	50	45
95 KENT STATE UNIVERSITY	63	54	43	45	20	9	52	50
96 SUNY AT ALBANY	61	48	50	41	11	7	52	43
97 OKLAHOMA STATE UNIVERSITY	61	53I	52	46I	9	7I	57	51I
98 MICHIGAN TECH UNIVERSITY	61	60	56	56	5	4	58	58
99 UNIVERSITY OF DENVER	61	60	58	55	3	5	59	58
100 UNIVERSITY OF NEW ORLEANS	60	64	51	53	9	11	55	58
TOTAL, 1ST 100 INSTS.	10,981	10,222	8,766	8,238	2,215	1,984	9,516	8,975
TOTAL, ALL OTHER INSTS.	5,539	5,365	4,613	4,556	926	809	4,998	4,867

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-31. — LIFE SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	116,284	113,538	94,175	92,693	22,109	20,845	101,587	99,662
1 HARVARD UNIVERSITY	5,197	4,915	3,327	3,122	1,870	1,793	4,570	4,228
2 UNIVERSITY OF MINNESOTA	2,263	2,256	1,849	1,846	414	410	1,866	1,876
3 LOUISIANA STATE UNIV	2,256	2,288	1,793	1,863	463	425	1,887	1,956
4 OHIO STATE UNIVERSITY	2,139	2,574	1,138	1,653	1,001	921	1,785I	2,109
5 UNIV OF WIS-MADISON	2,046	2,017	1,670	1,649	376	368	1,898	1,857
6 UNIVERSITY OF MICHIGAN	1,765	1,758	1,323	1,342	442	416	1,506	1,514
7 UNIVERSITY OF FLORIDA	1,688	1,682	1,545	1,553	143	129	1,592	1,596
8 JOHNS HOPKINS UNIVERSITY	1,556	1,549	1,496	1,483	60	66	1,526	1,515
9 YALE UNIVERSITY	1,543	1,553	1,320	1,323	223	230	1,432	1,439
10 UNIVERSITY OF WASHINGTON	1,492	1,497	1,112	1,133	380	364	1,308	1,316
TOTAL, 1ST 10 INSTS.	21,945	22,089	16,573	16,967	5,372	5,122	19,371	19,407
11 CORNELL UNIVERSITY	1,439	1,367	1,348	1,291	91	76	1,384I	1,318I
12 UNIVERSITY OF IOWA	1,422	1,352	1,151	1,106	271	246	1,329	1,262
13 NEW YORK UNIVERSITY	1,406	1,359	952	951	454	408	1,107	1,095
14 CUNY MT SINAI SCH OF MED	1,349I	1,274I	1,091I	1,045I	258I	229I	1,155I	1,091I
15 COLUMBIA UNIV MAIN DIV	1,287	1,234	1,001	922	286	312	1,096	997I
16 UNIVERSITY OF KENTUCKY	1,277	1,270	1,151	1,137	126	133	1,189	1,179
17 WASHINGTON UNIVERSITY	1,271	1,238	1,185	1,152	86	86	1,221	1,187
18 DUKE UNIVERSITY	1,271	1,143	1,231	1,116	40	27	1,247	1,068E
19 UNIV OF CAL SAN FRANCISCO	1,260	1,282	851	874	409	408	812	845
20 UNIVERSITY OF UTAH	1,256	881	1,151	673	105	208	1,179	781
TOTAL, 1ST 20 INSTS.	35,183	34,489	27,685	27,234	7,498	7,255	31,092	30,230
21 UNIVERSITY OF PITTSBURGH	1,234	1,156	1,043	968	191	188	1,113I	1,043
22 UNIV OF PENNSYLVANIA	1,209	985	950	769	259	216	1,056	844
23 CASE WESTERN RESERVE UNIV	1,197	1,214	983	995	214	219	1,060	1,095
24 UNIV OF CAL LOS ANGELES	1,142	1,110	779	763	363	347	779	715
25 UNIV OF SOUTHERN CAL	1,128	1,128	877	877	251	251	942	942
26 TEXAS A & M UNIVERSITY	1,069	1,065	1,069	1,065	0	0	1,069	1,065
27 UNIV ALABAMA BIRMINGHAM	1,049	990	953	892	96	98	984	925
28 UNIV OF CAL DAVIS	1,044	994	842	800	202	194	815	768
29 WAYNE STATE UNIVERSITY	1,040	934	722	711	318	223	845	804
30 HOWARD UNIVERSITY	1,027I	957	645I	618	382I	339	688I	641
TOTAL, 1ST 30 INSTS.	46,322	45,022	36,548	35,692	9,774	9,330	40,446	39,074
31 U TEX HLTH SCI CTR DALLAS	976	831	720	691	256	140	807	763
32 U TEX HLTH SCI CTR HOUSTN	948I	930	738I	727	210I	203	828I	813
33 INDIANA UNIVERSITY	942	942	691	691	251	251	780	780
34 UNIV OF MD BALT PROF SCH	933	931	570	656	363	275	679	734
35 COL OF MED & DENT OF N J	927	927	711	711	216	216	796	796
36 UNIV OF ILL MED CTR CHGO	907	1,630	637	920	270	710	756	1,158
37 MICHIGAN STATE UNIVERSITY	889	883	808	800	81	83	834	824
38 UNIV OF MISSOURI COLUMBIA	885	821	799	745	86	76	827	776
39 N C STATE UNIV AT RALEIGH	881	887	872	878	9	9	875	882
40 MED UNIV OF SO CAROLINA	881	814	720	683	161	131	679	740
TOTAL, 1ST 40 INSTS.	55,491	54,618	43,814	43,194	11,677	11,424	48,309	47,340
41 YESHIVA UNIVERSITY	878	828	690	672	188	156	773	747
42 NEW YORK MEDICAL COLLEGE	873	708I	617	486I	256	222I	746	590I
43 UNIV OF NC AT CHAPEL HILL	849	826	830	800	19	26	838	813
44 U TEX HLTH SCI CTR S ANTO	849	854I	728	726I	121	128I	763	767I
45 UNIV OF OKLA HLTH SCI CTR	846	744	694	590	152	154	765	649
46 UNIV OF ILL URBANA	840	723	728	637	112	86	443	373
47 BAYLOR COL OF MEDICINE	834	792	733	738	101	54	784	766
48 UNIVERSITY OF CONNECTICUT	831	824	678	656	153	168	748	722
49 UNIVERSITY OF CHICAGO	827	825	794	799	33	26	806	812
50 VIRGINIA COMMONWLTH UNIV	816	688	755	637	61	51	779	663
TOTAL, 1ST 50 INSTS.	63,934	62,430	51,061	49,935	12,873	12,495	55,755	54,244

SEE FOOTNOTES AT END OF TABLE.

TABLE B-31. — LIFE SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 IOWA ST U OF SCI & TECH	810	799	752	742	58	57	790	772
52 TEMPLE UNIVERSITY	804	802	656	646	148	156	8031	8011
53 SUNY DOWNSTATE MED CTR	7991	785	6631	653	1361	132	7161	704
54 UNIVERSITY OF MIAMI	783	783	733	733	50	50	759	759
55 UNIVERSITY OF KANSAS	7741	7601	6221	6121	641	641	7031	6901
56 UNIV OF TEX CANCER CENTER	7691	7571	7031	6931	661	641	7041	6931
57 PENNSYLVANIA STATE UNIV	767	743	720	696	47	47	745	724
58 UNIV OREGON HLTH SCI CTR	758	791	503	550	255	241	594	659
59 U OF ARKANSAS MED SCI CAM	749	744	662	679	87	65	689	702
60 UNIVERSITY OF ARIZONA	742	632	630	537	112	95	679	576
TOTAL, 1ST 60 INSTS.	71,689	70,026	57,705	56,476	13,984	13,550	62,939	61,325
61 UNIV TENN CTR HEALTH SCI	736	762	566	606	170	156	612	668
62 SUNY AT BUFFALO	7191	703E	4411	434E	2781	269E	5241	513E
63 UNIVERSITY OF CINCINNATI	717	696	619	602	98	94	625	628
64 UNIVERSITY OF COLORADO	714	743	645	656	69	87	692	692
65 WASHINGTON STATE UNIV	7121	6981	5161	5081	1961	1901	371	6011
66 GEORGETOWN UNIVERSITY	705	688	679	659	26	29	692	674
67 BOSTON UNIVERSITY	694	775	571	639	123	136	605	684
68 UNIVERSITY OF ROCHESTER	684	644	660	618	24	26	667	628
69 UNIV OF HAWAII-MANOA	666	630	486	472	180	158	548	526
70 KANS ST U - AG & APP SCI	654	653	577	524	77	129	616	594
TOTAL, 1ST 70 INSTS.	78,690	77,018	63,465	62,194	15,225	14,824	68,895	67,533
71 PURDUE UNIVERSITY	653	633	588	583	65	50	604	594
72 NORTHWESTERN UNIVERSITY	650	410	478	325	172	85	563	368
73 UNIVERSITY OF GEORGIA	637	617	622	599	15	18	628	606
74 VANDERBILT UNIVERSITY	630	484	509	464	121	20	540	403
75 MEDICAL COL OF GEORGIA	614	515	473	405	141	110	543	441
76 UNIVERSITY OF NEW MEXICO	612	609	463	459	149	150	539	524
77 OREGON STATE UNIVERSITY	599	513	561	490	38	23	572	497
78 UNIVERSITY OF MISSISSIPPI	556	432	429	336	127	96	4291	68
79 UNIV OF CAL BERKELEY	549	561	409	423	140	138	420	417
80 GEORGE WASHINGTON UNIV	544	540	329	326	215	214	421	417
TOTAL, 1ST 80 INSTS.	84,734	82,332	68,326	66,604	16,408	15,728	74,156	71,870
81 EMORY UNIVERSITY	5301	5011	4471	4281	831	731	4611	4361
82 COLORADO STATE UNIVERSITY	497	471	480	458	17	13	495	474
83 UNIVERSITY OF VIRGINIA	494	523	494	523	0	0	494	523
84 UNIV OF NEBRASKA-LINCOLN	488	482	362	351	126	131	452	446
85 UNIV OF CAL SAN DIEGO	487	489	439	441	48	48	421	429
86 TUFTS UNIVERSITY	486	418	183	163	303	255	243	204
87 SUNY AT STONY BROOK	485	427	433	383	52	44	450	397
88 PHILA COL OSTEOPATHIC MED	478	137	103	83	375	54	1	90
89 CLEMSON UNIVERSITY	464	459	461	454	3	5	462	456
90 STANFORD UNIVERSITY	458	458	395	395	63	63	417	417
TOTAL, 1ST 90 INSTS.	89,601	86,697	72,123	70,283	17,478	16,414	78,054	75,743
91 UNIV OF P R-MED SCI CMPUS	4581	4491	3331	3281	1251	1211	3871	3801
92 UNIVERSITY OF LOUISVILLE	456	477	353	342	103	135	391	387
93 ST LOUIS UNIVERSITY	439	384	366	310	73	74	390	360
94 MASS INST OF TECHNOLOGY	425	411	386	377	39	34	406	394
95 UNIV OF VT & ST AGRIC COL	424	338	393	283	31	55	402	306
96 UNIV OF SOUTH CAROLINA	424	362	374	330	50	32	396	343
97 AUBURN UNIVERSITY	424	416	407	413	17	3	413	415
98 RUTGERS THE ST UNIV OF NJ	408	424	403	416	5	8	405	423
99 VA POLYTECH INST & ST U	406	397	404	394	2	3	403	396
100 INST OF AGRI UNIV OF TENN	405	423	405	423	0	0	405	423
TOTAL, 1ST 100 INSTS.	93,870	90,778	75,947	73,899	17,923	16,879	82,054	79,571
TOTAL, ALL OTHER INSTS.	22,414	22,760	18,228	18,794	4,186	3,966	19,533	20,091

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-32. -- PSYCHOLOGISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	10,396	10,182	8,192	8,042	2,204	2,140	8,920	8,807
1 UNIVERSITY OF MICHIGAN	213	208	164	167	49	41	187	190
2 UNIV OF WIS-MADISON	194	200	161	162	33	38	180	180
3 UNIV OF ILL URBANA	175	177	150	145	25	32	88	85
4 NEW YORK UNIVERSITY	164	192	74	84	90	108	97	117
5 UNIVERSITY OF CONNECTICUT	147	134	112	108	35	26	126	117
6 UNIVERSITY OF MINNESOTA	145	142	128	127	17	15	134	130
7 UNIV OF TEXAS AT AUSTIN	145	181	118	129	27	52	133	154
8 TEMPLE UNIVERSITY	135	143	98	104	37	39	98	104I
9 SOUTHERN ILL U-CARBONDALE	121	104	100	89	21	15	110	97
10 UNIV OF CAL LOS ANGELES	118	110	71	63	47	47	84	77
TOTAL, 1ST 10 INSTS.	1,857	1,591	1,176	1,178	381	413	1,239	1,251
11 CORNELL UNIVERSITY	116	125	105	117	11	8	108I	117I
12 MICHIGAN STATE UNIVERSITY	115	123	115	115	0	8	115	118
13 NEW MEXICO STATE UNIV	113	63	106	55	7	8	110	59
14 RUTGERS THE ST UNIV OF NJ	107	144	107	130	0	14	107	135
15 PURDUE UNIVERSITY	105	103	88	88	17	15	95	93
16 UNIVERSITY OF ARIZONA	93	83	88	76	5	7	89	79
17 UNIV OF SOUTH CAROLINA	91	92	79	84	12	8	84	86
18 UNIVERSITY OF GEORGIA	90	89	85	85	5	4	87	87
19 YESHIVA UNIVERSITY	88	88	49	48	39	40	69	69
20 SYRACUSE UNIVERSITY	86	80	64	60	22	20	75	70
TOTAL, 1ST 20 INSTS.	2,561	2,581	2,062	2,036	499	545	2,180	2,164
21 UNIVERSITY OF ROCHESTER	86	73	82	71	4	2	83	71
22 INDIANA UNIVERSITY	86	86	80	80	6	6	83	83
23 UNIV OF P R-RIO PIEDRAS	84I	82I	71I	70I	13I	12I	75I	73I
24 PENNSYLVANIA STATE UNIV	82	81	76	75	6	6	78	77
25 SUNY AT ALBANY	80	72	70	65	10	7	75	67
26 UNIVERSITY OF COLORADO	79	101	66	74	13	27	70	86
27 WAYNE STATE UNIVERSITY	78	56	36	39	42	17	50	45
28 PACE UNIVERSITY	76	68I	20	21I	56	47I	41	36I
29 OHIO STATE UNIVERSITY	76	53	48	50	28	3	74I	52
30 NORTHWESTERN UNIVERSITY	76	51	68	51	8	0	72	51
TOTAL, 1ST 30 INSTS.	3,364	3,304	2,679	2,632	685	672	2,883	2,806
31 UNIVERSITY OF KANSAS	74I	72I	60I	59I	14I	13I	65I	63I
32 U TENNESSEE KNOXVILLE	74	78	60	61	14	17	64	66
33 ST JOHN'S UNIVERSITY (NY)	73	27	34	21	39	6	47	23
34 GEORGE WASHINGTON UNIV	73	74	25	34	48	40	45	51
35 SAN DIEGO STATE UNIV	72	50	51	46	21	4	51	48
36 FAIRLEIGH DICKINSON UNIV	70	73I	42	42I	28	31I	50	49I
37 UNIVERSITY OF KENTUCKY	70	93	59	82	11	31	62	72
38 ADELPHI UNIVERSITY	69	64	25	27	44	37	39	36
39 UNIVERSITY OF PITTSBURGH	68	71	65	65	3	6	65I	67
40 WASHINGTON STATE UNIV	68I	66I	50I	49I	18I	17I	23	56I
TOTAL, 1ST 40 INSTS.	4,075	3,972	3,150	3,098	925	874	3,396	3,338
41 BRIGHAM YOUNG UNIVERSITY	65	52	52	42	13	10	56	44
42 UNIV OF MASS AT AMHERST	65	68	56	59	9	9	60	64
43 U OF HOUSTON CENTRAL CAM	65	89	42	30	23	59	49	89I
44 UNIVERSITY OF WASHINGTON	64	61	49	48	15	13	56	54
45 UNIV OF SOUTH FLORIDA	64	55I	48	43I	16	12I	52	45I
46 MASS INST OF TECHNOLOGY	63	44	51	31	12	13	57	38
47 HARVARD UNIVERSITY	63	57	54	48	9	9	58	52
48 SUNY AT BUFFALO	61I	60E	58I	57E	3I	3E	58I	58E
49 ILLINOIS STATE UNIVERSITY	60	62	52	52	8	10	55	56
50 LOYOLA UNIV - CHICAGO	59	55	35	34	24	21	43	41
TOTAL, 1ST 50 INSTS.	4,704	4,575	3,647	3,542	1,057	1,033	3,942	3,881

SEE FOOTNOTES AT END OF TABLE.

TABLE 8-32. — PSYCHOLOGISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 YALE UNIVERSITY	59	65	39	48	20	17	49	57
52 UNIV OF CAL BERKELEY	59	71	38	41	21	30	46	51
53 IOWA ST U OF SCI & TECH	58	62	51	54	7	8	48	53
54 CAL SCH PROF PSYCH-L A	58I	53	22I	21	34I	32	27I	25I
55 COLUMBIA U TEACHERS COL	58	58	43	43	15	15	47	47
56 FLORIDA STATE UNIVERSITY	57	48	47	39	10	9	54	46
57 SUNY AT STONY BROOK	56	64	52	56	4	8	54	58
58 UNIV OF WIS-MILWAUKEE	54	58	44	46	10	12	45	50
59 HOFSTRA UNIVERSITY	54	46	31	28	23	18	40	35
60 UNIV OF SOUTHERN CAL	49	49	38	38	11	11	40	40
TOTAL, 1ST 60 INSTS.	5,266	5,149	4,052	3,956	1,214	1,193	4,395	4,344
61 UNIVERSITY OF UTAH	49	65	40	41	9	24	41	55
62 UNIVERSITY OF FLORIDA	49	49	44	47	5	2	46	49
63 UNIV OF MD COLLEGE PARK	48	47	44	42	4	5	45	43
64 UNIVERSITY OF NEW MEXICO	48	51	35	35	13	16	41	43
65 MIAMI UNIVERSITY (OHIO)	47	52	46	51	1	1	46	52
66 UNIVERSITY OF CINCINNATI	47	40	39	37	8	3	41	38
67 WICHITA STATE UNIVERSITY	47	47	42	41	5	6	44	43
68 UNIV OF MISSOURI COLUMBIA	46	48	42	36	4	12	44	41
69 ARIZONA STATE UNIVERSITY	46	32	44	30	2	2	45	28
70 UNIVERSITY OF DENVER	46	41	35	32	11	9	40	37
TOTAL, 1ST 70 INSTS.	5,739	5,621	4,463	4,348	1,276	1,273	4,830	4,774
71 EMORY UNIVERSITY	45I	42I	35I	33I	10I	9I	37I	34I
72 LONG ISLAND UNIVERSITY	45	38	34	22	11	16	37	27
73 LOUISIANA STATE UNIV	45	37	33	31	12	6	38	33
74 EAST CAROLINA UNIVERSITY	44	44	32	32	12	12	44	44
75 AUBURN UNIVERSITY	44	34	30	27	14	7	35	30
76 CENTRAL MICHIGAN UNIV	44	35	35	34	9	1	38	35
77 TEXAS A & M UNIVERSITY	43	41	43	41	0	0	43	41
78 COLORADO STATE UNIVERSITY	43	47	42	45	1	2	43	43
79 UNIVERSITY OF LOUISVILLE	42	43	34	36	8	7	39	40
80 UNIV OF CAL SANTA BARBARA	42	40	32	32	10	8	33	32
TOTAL, 1ST 80 INSTS.	6,176	6,022	4,813	4,681	1,363	1,341	5,218	5,134
81 UNIVERSITY OF CHICAGO	42	41	40	39	2	2	41	40
82 STANFORD UNIVERSITY	41	41	28	28	13	13	28	28
83 OHIO UNIVERSITY	41	30I	25	30I	16	0I	29	30I
84 UNIVERSITY OF MIAMI	41	28	39	28	2	0	41	28
85 UNIVERSITY OF IOWA	41	40	36	33	5	7	39	37
86 WRIGHT STATE UNIVERSITY	41	33	32	27	9	6	38	27
87 COL OF MED & DENT OF N J	41	41	27	27	14	14	35	35
88 GEORGE MASON UNIVERSITY	41I	40I	26I	26I	15I	14I	32I	31I
89 ROCKEFELLER UNIVERSITY	41	58	34	52	7	6	37	54
90 UNIV OF NEBRASKA-LINCOLN	41	48	39	39	2	9	40	43
TOTAL, 1ST 90 INSTS.	6,587	6,422	5,139	5,010	1,448	1,412	5,572	5,488
91 DARTMOUTH COLLEGE	41	31I	20	20I	21	11I	28	23I
92 NEW SCH FOR SOC RESEARCH	40I	37I	15I	15I	25I	22I	40I	37I
93 VANDERBILT UNIVERSITY	40	40	39	37	1	3	39	32
94 GEORGIA STATE UNIVERSITY	40	40	30	30	10	10	35	35
95 BALL STATE UNIVERSITY	40	41	40	41	0	0	40	41
96 BOSTON UNIVERSITY	39	45	36	41	3	4	37	42
97 UNIV OF ILL CHICAGO CIR	38	40	32	32	6	8	34	32
98 UNIV OF HAWAII-MANOA	38	41	30	33	8	8	35	37
99 WESTERN MICHIGAN UNIV	37	39	34	37	3	2	34	38
100 OLD DOMINION UNIVERSITY	36	46	29	28	7	18	29	31
TOTAL, 1ST 100 INSTS.	6,976	6,822	5,444	5,324	1,532	1,498	5,925	5,836
TOTAL, ALL OTHER INSTS.	3,420	3,360	2,748	2,718	672	642	2,995	2,970

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-33. — SOCIAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	28,400	27,801	22,783	22,816	5,617	4,985	24,846	24,528
1 OHIO STATE UNIVERSITY	685	306	265	223	420	83	593I	262
2 UNIVERSITY OF MINNESOTA	599	588	534	519	65	69	527	493
3 WEST VIRGINIA UNIVERSITY	498	525	451	489	47	46	467	507
4 RUTGERS THE ST UNIV OF NJ	458	460	449	448	9	12	451	447
5 UNIV OF ILL URBANA	454	413	389	374	65	39	229	190
6 UNIV OF WIS-MADISON	438	451	344	356	94	95	392	400
7 TEXAS A & M UNIVERSITY	408	393	408	393	0	0	408	393
8 UNIVERSITY OF MICHIGAN	381	341	320	303	61	38	353	320
9 UNIV OF TEXAS AT AUSTIN	362	389	330	298	32	91	344	341
10 COLUMBIA UNIV MAIN DIV	354	341	257	256	97	85	290	284I
TOTAL, 1ST 10 INSTS.	4,637	4,217	3,747	3,659	890	558	4,056	3,638
11 UNIV OF CAL BERKELEY	345	341	209	204	136	137	259	252
12 MICHIGAN STATE UNIVERSITY	298	312	284	278	14	34	291	295
13 CORNELL UNIVERSITY	294	318	269	301	25	17	280I	303I
14 UNIV OF CAL LOS ANGELES	291	287	184	169	107	118	227	212
15 UNIV OF HAWAII-MANOA	291	262	224	211	67	51	253	235
16 NEW YORK UNIVERSITY	288	344	179	167	109	77	215	192
17 UNIV OF PENNSYLVANIA	266	340	250	223	16	17	256	228
18 UNIV OF MD COLLEGE PARK	264	257	191	200	73	57	221	222
19 UNIVERSITY OF CONNECTICUT	258	348	209	203	49	45	225	218
20 TEMPLE UNIVERSITY	253	268	159	158	94	110	223I	229I
TOTAL, 1ST 20 INSTS.	7,485	6,994	5,905	5,773	1,580	1,221	6,507	6,025
21 MASS INST OF TECHNOLOGY	251	267	223	304	28	63	238	237
22 UNIVERSITY OF KENTUCKY	241	261	213	224	28	37	210	235
23 UNIV OF SOUTH CAROLINA	239	236	210	205	29	31	215	215
24 PURDUE UNIVERSITY	238	241	199	196	39	45	214	213
25 UNIV OF ILL CHICAGO CIR	234	238	172	188	62	50	192	200
26 WAYNE STATE UNIVERSITY	233	170	86	87	147	83	135	117
27 UNIVERSITY OF WASHINGTON	232	250	181	185	51	65	208	217
28 BOSTON UNIVERSITY	228	106	129	94	99	12	162	97
29 PENNSYLVANIA STATE UNIV	224	234	192	207	32	27	205	218
30 UNIVERSITY OF KANSAS	219I	215I	181I	178I	38I	37I	201I	198I
TOTAL, 1ST 30 INSTS.	9,824	9,212	7,691	7,541	2,133	1,671	8,489	7,972
31 VIRGINIA COMMONWLTH UNIV	218	104	134	103	84	1	148	104
32 UNIVERSITY OF ARIZONA	216	194	198	178	18	16	207	185
33 JOHNS HOPKINS UNIVERSITY	212	197	125	119	87	78	156	146
34 AMERICAN UNIVERSITY	210	211	110	95	100	116	149	145
35 N C STATE UNIV AT RALEIGH	206	216	169	181	37	35	178	193
36 UNIVERSITY OF COLORADO	202	189	191	167	11	22	196	175
37 WASHINGTON STATE UNIV	200I	195I	151I	148I	49I	47I	78	175I
38 FLORIDA STATE UNIVERSITY	198	195	174	167	24	28	182	178
39 INDIANA UNIVERSITY	197	197	159	159	38	38	175	175
40 UNIVERSITY OF IOWA	192	187	155	171	37	16	171	179
TOTAL, 1ST 40 INSTS.	11,875	11,097	9,257	9,029	2,618	2,068	10,132	9,627
41 NEW MEXICO STATE UNIV	189	172	161	145	28	27	168	160
42 ST JOHN'S UNIVERSITY (NY)	186	161	89	79	97	82	121	106
43 YALE UNIVERSITY	185	215	157	177	28	38	171	196
44 HARVARD UNIVERSITY	184	180	152	147	32	33	168	156
45 SOUTHERN ILL U-CARBONDALE	184	192	168	166	16	26	174	177
46 UNIV OF CAL DAVIS	183	181	142	135	41	46	142	139
47 KANS ST U - AG & APP SCI	183	168	151	147	32	21	165	160
48 SUNY AT ALBANY	181	149	144	113	37	36	155	126
49 U TENNESSEE KNOXVILLE	177	181	163	167	14	14	168	174
50 UNIVERSITY OF PITTSBURGH	176	172	147	144	29	28	158I	155
TOTAL, 1ST 50 INSTS.	13,703	12,868	10,731	10,449	2,972	2,419	11,725	11,176

SEE FOOTNOTES AT END OF TABLE.

TABLE B-33. — SOCIAL SCIENTISTS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS: JANUARY 1980 AND JANUARY 1981

- CONTINUED INSTITUTIONAL RANKING	TOTAL		FULL TIME		PART TIME		TOTAL FTE	
	1981	1980	1981	1980	1981	1980	1981	1980
51 GEORGE WASHINGTON UNIV	172	177	91	99	81	78	123	129
52 UNIV OF WIS-MILWAUKEE	171	202	113	140	58	62	131	165
53 LONG ISLAND UNIVERSITY	171	129	73	53	98	76	104	74
54 NORTHWESTERN UNIVERSITY	169	148	139	126	30	22	153	136
55 UNIV OF CAL SANTA BARBARA	169	157	106	107	63	50	129	121
56 UNIV OF SOUTH FLORIDA	167	136I	121	119I	46	17I	136	124I
57 PORTLAND STATE UNIVERSITY	164	148	106	96	58	52	125	119
58 UNIV OF NC AT CHAPEL HILL	161	179	154	173	7	6	157	177
59 AUBURN UNIVERSITY	155	199	138	165	17	34	144	183
60 IOWA ST U OF SCI & TECH	154	146	128	126	26	20	114	136
TOTAL, 1ST 60 INSTS.	15,356	14,489	11,900	11,653	3,456	2,836	13,044	12,541
61 UNIVERSITY OF UTAH	154	193	121	137	33	56	134	163
62 UNIV OF P R-RIO PIEDRAS	151I	148I	144I	142I	7I	6I	145I	142I
63 UNIVERSITY OF GEORGIA	150	162	147	157	3	5	148	159
64 UNIVERSITY OF CHICAGO	145	145	140	144	5	1	143	144
65 DUKE UNIVERSITY	144	174	130	124	14	50	135	129
66 LOUISIANA STATE UNIV	141	146	131	135	10	11	134	134
67 FLORIDA INST OF TECH	137	143	7	6	130	137	48	42
68 UNIV OF MASS AT AMHERST	137	136	125	125	12	11	130	127
69 SAN DIEGO STATE UNIV	133	154	107	110	26	44	132	123
70 ARIZONA STATE UNIVERSITY	133	131	129	106	4	25	132	120
TOTAL, 1ST 70 INSTS.	16,781	16,021	13,081	12,839	3,700	3,182	14,326	13,826
71 SUNY AT BUFFALO	132I	130E	125I	123E	7I	7E	127I	126E
72 COLORADO STATE UNIVERSITY	131	130	130	128	1	2	127	127
73 BRIGHAM YOUNG UNIVERSITY	130	162	100	124	30	38	109	135
74 UNIV OF MISSOURI ST LOUIS	130	105I	87	61I	43	44I	114I	86I
75 UNIV OF SOUTHERN CAL	128	128	93	93	35	35	108	108
76 UNIVERSITY OF NEW MEXICO	127	126	92	107	35	19	106	114
77 WESTERN MICHIGAN UNIV	126	123	98	98	28	25	104	104
78 UNIV OF P R-MAYAGUEZ	122I	120I	122I	120I	0I	0I	122I	120I
79 PRINCETON UNIVERSITY	122	121	104	104	18	17	115	111
80 VA POLYTECH INST & ST U	121	116	120	115	1	1	120	116
TOTAL, 1ST 80 INSTS.	18,050	17,282	14,152	13,912	3,898	3,370	15,482	14,975
81 ILLINOIS STATE UNIVERSITY	120	128	103	110	17	18	97	115
82 STANFORD UNIVERSITY	120	120	99	99	21	21	97	97
83 SYRACUSE UNIVERSITY	117	91	107	78	10	13	112	85
84 SUNY AT STONY BROOK	117	118	104	103	13	15	107	107
85 FORDHAM UNIVERSITY	117	114	74	68	43	46	86	89
86 GEORGETOWN UNIVERSITY	116	108	83	85	33	23	99	97
87 KENT STATE UNIVERSITY	113	114	110	114	3	0	111	68
88 UNIVERSITY OF FLORIDA	111	99	104	94	7	5	107	98
89 UNIVERSITY OF LOUISVILLE	111	96	72	62	39	34	88	74
90 FAIRLEIGH DICKINSON UNIV	110	130I	59	50I	51	80I	75	70I
TOTAL, 1ST 90 INSTS.	19,202	18,400	15,067	14,775	4,135	3,625	16,465	15,877
91 EMORY UNIVERSITY	110I	104I	91I	87I	19I	17I	95I	89I
92 MISSISSIPPI STATE UNIV	107	127	104	123	3	4	104	125
93 HOWARD UNIVERSITY	104I	97	58I	56	44I	41	72I	67
94 UNIV OF TEX AT ARLINGTON	104	106	93	84	11	22	94	90
95 UNIV OF ARK FAYETTEVILLE	103	223	90	220	13	3	91	220
96 NORTHERN ILLINOIS UNIV	103	107	83	91	20	16	91	101
97 UNIVERSITY OF DELAWARE	102	96	100	89	2	7	100	92
98 OKLAHOMA STATE UNIVERSITY	102	105I	97	101I	5	4I	99	104I
99 UNIV OF NEBRASKA-LINCOLN	101	104	100	103	1	1	101	104
100 UNIVERSITY OF OREGON MAIN	100	68	77	58	23	10	88	61
TOTAL, 1ST 100 INSTS.	20,238	19,537	15,960	15,787	4,278	3,750	17,402	16,931
TOTAL, ALL OTHER INSTS.	8,162	8,264	6,823	7,029	1,339	1,235	7,444	7,596

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-34. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION, CONTROL, AND STATUS: JANUARY 1981

DIVISION AND STATE	PUBLIC			PRIVATE		
	TOTAL	FULL TIME	PART TIME	TOTAL	FULL TIME	PART TIME
TOTAL, ALL INSTITUTIONS	229,980	180,771	49,209	103,428	78,078	25,350
NEW ENGLAND	8,636	7,317	1,319	19,153	14,058	5,095
CONNECTICUT	2,629	2,091	538	3,555	2,572	983
MAINE	751	606	145	272	231	41
MASSACHUSETTS	3,345	2,870	475	13,603	10,000	3,603
NEW HAMPSHIRE	474	428	46	792	450	342
RHODE ISLAND	661	625	36	646	559	87
VERMONT	776	697	79	285	246	39
MIDDLE ATLANTIC	29,267	21,540	7,727	29,735	22,242	7,493
NEW JERSEY	5,654	4,292	1,362	2,344	1,474	870
NEW YORK	14,697	10,490	4,207	19,487	14,746	4,741
PENNSYLVANIA	8,916	6,758	2,158	7,904	6,022	1,882
EAST NORTH CENTRAL	42,467	32,465	10,002	14,478	10,780	3,698
ILLINOIS	9,826	7,767	2,059	6,583	4,941	1,642
INDIANA	4,463	3,632	831	1,391	1,143	248
MICHIGAN	10,697	8,233	2,464	1,418	875	543
OHIO	10,215	6,675	3,540	3,791	2,922	869
WISCONSIN	7,266	6,158	1,108	1,295	899	396
WEST NORTH CENTRAL	19,600	16,819	2,781	5,734	4,600	1,134
IOWA	4,122	3,571	551	865	689	176
KANSAS	3,761	3,093	668	293	242	51
MINNESOTA	4,721	3,993	728	781	614	167
MISSOURI	3,512	3,064	448	3,071	2,516	555
NEBRASKA	1,686	1,436	250	551	412	139
NORTH DAKOTA	968	906	62	26	17	9
SOUTH DAKOTA	830	756	74	147	110	37
SOUTH ATLANTIC	35,209	28,913	6,296	16,372	13,136	3,236
DELAWARE	713	691	22	23	22	1
DISTRICT OF COLUMBIA	216	150	66	4,368	2,807	1,561
FLORIDA	7,376	5,635	1,741	2,088	1,584	504
GEORGIA	4,501	3,979	522	1,597	1,285	312
MARYLAND	5,322	3,731	1,591	3,756	3,427	329
NORTH CAROLINA	5,595	4,924	671	2,919	2,672	247
SOUTH CAROLINA	3,795	3,263	532	440	384	56
VIRGINIA	5,864	4,973	891	895	746	149
WEST VIRGINIA	1,827	1,567	260	286	209	77
EAST SOUTH CENTRAL	14,341	12,023	2,318	2,717	2,261	456
ALABAMA	4,059	3,350	709	466	411	55
KENTUCKY	3,743	3,198	545	393	303	90
MISSISSIPPI	2,227	1,968	259	171	132	39
TENNESSEE	4,312	3,507	805	1,687	1,415	272
WEST SOUTH CENTRAL	25,238	21,148	4,090	4,360	3,565	795
ARKANSAS	2,144	1,922	222	155	130	25
LOUISIANA	4,609	3,895	714	878	737	141
OKLAHOMA	2,952	2,487	465	470	379	91
TEXAS	15,533	12,844	2,689	2,857	2,319	538
MOUNTAIN	16,085	13,885	2,200	1,478	1,256	222
ARIZONA	3,327	2,800	527	39	32	7
COLORADO	4,073	3,655	418	486	417	69
IDAHO	1,050	920	130	133	112	21
MONTANA	999	868	131	77	50	27
NEVADA	530	401	129	0	0	0
NEW MEXICO	2,629	2,179	450	66	43	23
UTAH	2,707	2,432	275	677	602	75
WYOMING	770	630	140	0	0	0
PACIFIC	36,707	24,804	11,903	8,846	5,899	2,947
ALASKA	356	307	49	12	9	3
CALIFORNIA	25,776	16,569	9,207	7,863	5,135	2,728
HAWAII	1,312	1,023	289	76	25	51
OREGON	3,953	2,840	1,113	409	346	63
WASHINGTON	5,310	4,065	1,245	486	384	102
OUTLYING AREAS	2,430	1,857	573	555	281	274

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-35. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD OF EMPLOYMENT: JANUARY 1981

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	333,408	34,789	34,059	10,026	38,900	137,238	23,341	55,055
NEW ENGLAND	27,789	2,878	2,842	815	2,695	12,730	1,787	4,042
CONNECTICUT	6,184	562	567	122	652	2,797	493	991
MAINE	1,023	87	118	72	144	250	99	253
MASSACHUSETTS	16,948	1,865	1,754	484	1,473	8,335	886	2,151
NEW HAMPSHIRE	1,266	129	126	45	131	568	97	170
RHODE ISLAND	1,307	159	173	68	190	283	127	307
VERMONT	1,061	76	104	24	105	497	85	170
MIDDLE ATLANTIC	59,002	5,554	6,360	1,309	7,505	22,742	5,014	10,518
NEW JERSEY	7,998	800	932	185	1,203	2,343	751	1,784
NEW YORK	34,184	2,866	3,540	826	4,224	13,741	2,979	6,008
PENNSYLVANIA	16,820	1,888	1,888	298	2,078	6,658	1,284	2,726
EAST NORTH CENTRAL	56,945	6,154	5,845	1,638	6,782	22,302	4,280	9,944
ILLINOIS	16,409	1,350	1,701	475	2,114	6,369	1,425	2,975
INDIANA	5,854	842	782	147	700	1,967	417	999
MICHIGAN	12,115	1,367	1,209	238	1,374	4,765	921	2,241
OHIO	14,006	1,783	1,246	306	1,729	5,699	926	2,317
WISCONSIN	8,561	812	907	472	865	3,502	591	1,412
WEST NORTH CENTRAL	25,334	2,139	2,188	592	2,428	12,396	1,579	4,012
IOWA	4,987	479	384	61	454	2,639	274	696
KANSAS	4,054	388	366	87	458	1,756	295	704
MINNESOTA	5,502	281	465	142	527	2,546	392	1,149
MISSOURI	6,583	516	570	158	591	3,476	391	881
NEBRASKA	2,237	193	231	61	203	1,114	132	303
NORTH DAKOTA	994	145	91	62	117	385	49	145
SOUTH DAKOTA	977	137	81	21	78	480	46	134
SOUTH ATLANTIC	51,581	5,633	5,152	1,434	6,374	21,322	3,086	8,580
DELAWARE	736	145	122	78	84	138	28	141
DISTRICT OF COLUMBIA	4,584	371	475	120	361	2,372	170	715
FLORIDA	9,464	820	812	381	1,390	3,706	670	1,685
GEORGIA	6,098	916	650	175	751	2,342	377	887
MARYLAND	9,078	1,377	1,213	113	1,084	3,467	516	1,308
NORTH CAROLINA	8,514	673	705	188	920	4,182	484	1,362
SOUTH CAROLINA	4,235	417	373	59	566	1,970	236	614
VIRGINIA	6,759	711	641	296	1,010	2,449	500	1,152
WEST VIRGINIA	2,113	203	161	24	208	696	105	716
EAST SOUTH CENTRAL	17,058	1,758	1,475	305	2,114	7,898	1,001	2,507
ALABAMA	4,525	505	407	54	591	2,109	259	600
KENTUCKY	4,136	329	344	134	500	1,990	227	612
MISSISSIPPI	2,398	183	222	28	309	1,080	126	450
TENNESSEE	5,999	741	502	89	714	2,719	389	845
WEST SOUTH CENTRAL	29,598	2,612	2,596	946	3,382	14,458	1,586	4,018
ARKANSAS	2,299	113	167	23	211	1,382	96	307
LOUISIANA	5,487	448	420	225	583	3,080	193	538
OKLAHOMA	3,422	322	299	93	405	1,672	156	475
TEXAS	18,390	1,729	1,710	605	2,183	8,324	1,141	2,698
MOUNTAIN	17,563	2,494	1,863	957	1,927	6,560	1,078	2,684
ARIZONA	3,366	510	413	199	393	1,064	227	560
COLORADO	4,559	688	556	232	519	1,456	321	787
IDAHO	1,183	120	107	49	106	560	69	172
MONTANA	1,076	121	122	60	144	376	48	205
NEVADA	530	57	65	18	52	189	14	75
NEW MEXICO	2,695	453	244	109	314	1,017	196	362
UTAH	3,384	448	277	135	297	1,653	166	408
WYOMING	770	97	79	95	102	245	37	115
PACIFIC	45,553	5,389	5,373	1,985	5,311	15,864	3,643	7,988
ALASKA	368	40	28	77	27	92	24	80
CALIFORNIA	33,639	4,318	4,244	1,260	4,126	10,684	2,956	6,051
HAWAII	1,388	68	99	91	79	680	54	317
OREGON	4,362	326	450	229	536	1,918	251	652
WASHINGTON	5,796	637	552	328	543	2,490	358	888
OUTLYING AREAS	2,985	178	365	45	382	966	287	762

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-36. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD OF EMPLOYMENT: JANUARY 1981

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	258,849	26,992	28,173	8,551	27,091	110,059	16,820	41,163
NEW ENGLAND	21,375	2,373	2,486	710	1,921	9,361	1,342	3,182
CONNECTICUT	4,663	353	438	102	396	2,289	347	738
MAINE	837	83	109	58	96	222	74	195
MASSACHUSETTS	12,870	1,610	1,581	433	1,071	5,797	693	1,685
NEW HAMPSHIRE	878	114	104	33	108	331	55	133
RHODE ISLAND	1,184	140	161	66	162	269	106	280
VERMONT	943	73	93	18	88	453	67	151
MIDDLE ATLANTIC	43,782	4,246	5,133	1,139	4,824	17,528	3,394	7,518
NEW JERSEY	5,766	554	736	166	772	1,731	517	1,290
NEW YORK	25,236	2,186	2,886	701	2,599	10,730	1,974	4,160
PENNSYLVANIA	12,780	1,506	1,511	272	1,453	5,067	903	2,068
EAST NORTH CENTRAL	43,245	4,697	5,021	1,387	4,671	17,023	3,187	7,259
ILLINOIS	12,708	1,077	1,462	389	1,437	4,963	1,095	2,285
INDIANA	4,775	676	694	129	548	1,580	341	807
MICHIGAN	9,108	1,089	1,027	209	940	3,585	654	1,604
OHIO	9,597	1,167	1,018	250	1,053	4,063	616	1,430
WISCONSIN	7,057	688	820	410	693	2,832	481	1,133
WEST NORTH CENTRAL	21,419	1,879	1,958	530	1,985	10,462	1,290	3,315
IOWA	4,260	439	341	53	391	2,239	228	569
KANSAS	3,335	319	326	78	339	1,477	221	575
MINNESOTA	4,607	220	425	129	438	2,089	331	975
MISSOURI	5,580	441	498	138	476	3,028	318	681
NEBRASKA	1,848	184	212	56	163	859	110	264
NORTH DAKOTA	923	143	85	59	111	351	43	131
SOUTH DAKOTA	866	133	71	17	67	419	39	120
SOUTH ATLANTIC	42,049	4,740	4,320	1,247	4,621	18,445	2,288	6,388
DELAWARE	713	139	119	77	82	131	27	138
DISTRICT OF COLUMBIA	2,957	185	285	59	211	1,710	102	405
FLORIDA	7,219	616	646	329	912	3,147	465	1,104
GEORGIA	5,264	835	593	162	610	2,001	307	756
MARYLAND	7,158	1,268	1,033	98	754	2,892	320	793
NORTH CAROLINA	7,596	559	623	168	723	3,981	388	1,154
SOUTH CAROLINA	3,647	333	347	56	446	1,739	195	531
VIRGINIA	5,719	644	528	275	726	2,254	404	888
WEST VIRGINIA	1,776	161	146	23	157	590	80	619
EAST SOUTH CENTRAL	14,284	1,392	1,274	273	1,611	6,828	810	2,096
ALABAMA	3,761	414	333	46	434	1,866	192	476
KENTUCKY	3,501	252	300	126	372	1,736	191	524
MISSISSIPPI	2,100	179	209	24	271	928	102	387
TENNESSEE	4,922	547	432	77	534	2,298	325	709
WEST SOUTH CENTRAL	24,713	2,136	2,286	822	2,538	12,309	1,244	3,378
ARKANSAS	2,052	105	151	19	173	1,246	85	273
LOUISIANA	4,632	387	389	196	494	2,521	155	490
OKLAHOMA	2,866	279	260	79	291	1,421	129	407
TEXAS	15,163	1,365	1,486	528	1,580	7,121	875	2,208
MOUNTAIN	15,141	2,107	1,664	845	1,626	5,788	893	2,218
ARIZONA	2,832	427	373	176	330	908	183	435
COLORADO	4,072	591	516	214	436	1,327	274	714
IDAHO	1,032	114	92	41	85	510	50	140
MONTANA	918	102	100	59	110	335	40	172
NEVADA	401	46	54	63	39	138	14	47
NEW MEXICO	2,222	355	208	92	266	851	165	285
UTAH	3,034	395	253	126	276	1,507	142	335
WYOMING	630	77	68	74	84	212	25	90
PACIFIC	30,703	3,273	3,751	1,564	3,032	11,630	2,192	5,261
ALASKA	316	36	23	75	22	79	15	66
CALIFORNIA	21,704	2,448	2,831	936	2,222	7,768	1,699	3,800
HAWAII	1,048	59	91	87	53	495	32	231
OREGON	3,186	234	374	198	332	1,432	145	471
WASHINGTON	4,449	496	432	268	403	1,856	301	693
OUTLYING AREAS	2,138	149	280	34	262	685	180	548

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-37. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND FIELD OF EMPLOYMENT: JANUARY 1981

DIVISION AND STATE	TOTAL	ENGINEERS	PHYSICAL SCIENTISTS	ENVIRON-MENTAL SCIENTISTS	MATH. & COMPUTER SCIENTISTS	LIFE SCIENTISTS	PSYCHOL-OGISTS	SOCIAL SCIENTISTS
TOTAL, ALL INSTITUTIONS	74,559	7,797	5,886	1,475	11,809	27,179	6,521	13,892
NEW ENGLAND	6,414	505	356	105	774	3,369	445	860
CONNECTICUT	1,521	209	129	20	256	508	146	253
MAINE	186	4	9	14	48	28	25	58
MASSACHUSETTS	4,078	255	173	51	402	2,538	193	466
NEW HAMPSHIRE	388	15	22	12	23	237	42	37
RHODE ISLAND	123	19	12	2	28	14	21	27
VERMONT	118	3	11	6	17	44	18	19
MIDDLE ATLANTIC	15,220	1,308	1,227	170	2,681	5,214	1,620	3,000
NEW JERSEY	2,232	246	196	19	431	612	234	494
NEW YORK	8,948	680	654	125	1,625	3,011	1,005	1,848
PENNSYLVANIA	4,040	382	377	26	625	1,591	381	658
EAST NORTH CENTRAL	13,700	1,457	824	251	2,111	5,279	1,093	2,685
ILLINOIS	3,701	273	239	86	677	1,406	330	690
INDIANA	1,079	166	88	18	152	387	76	192
MICHIGAN	3,007	278	182	29	434	1,180	267	637
OHIO	4,409	616	228	56	676	1,636	310	887
WISCONSIN	1,504	124	87	62	172	670	110	279
WEST NORTH CENTRAL	3,915	260	230	62	443	1,934	289	697
IOWA	727	40	43	8	63	400	46	127
KANSAS	719	69	40	9	119	279	74	129
MINNESOTA	895	61	40	13	89	457	61	174
MISSOURI	1,003	75	72	20	115	448	73	200
NEBRASKA	389	9	19	5	40	255	22	39
NORTH DAKOTA	71	2	6	3	6	34	6	14
SOUTH DAKOTA	111	4	10	4	11	61	7	14
SOUTH ATLANTIC	9,532	893	832	187	1,753	2,877	798	2,192
DELAWARE	23	6	3	1	2	7	1	3
DISTRICT OF COLUMBIA	1,627	186	190	61	150	662	68	310
FLORIDA	2,245	204	166	52	478	559	205	581
GEORGIA	834	81	57	13	141	341	70	131
MARYLAND	1,920	109	180	15	330	575	196	515
NORTH CAROLINA	918	114	82	20	197	201	96	208
SOUTH CAROLINA	588	84	26	3	120	231	41	83
VIRGINIA	1,040	67	113	21	284	195	96	264
WEST VIRGINIA	337	42	15	1	51	106	25	97
EAST SOUTH CENTRAL	2,774	366	201	32	503	1,070	191	411
ALABAMA	764	91	74	8	157	243	67	124
KENTUCKY	635	77	44	8	128	254	36	88
MISSISSIPPI	298	4	13	4	38	152	24	63
TENNESSEE	1,077	194	70	12	180	421	64	136
WEST SOUTH CENTRAL	4,885	476	310	124	844	2,149	342	640
ARKANSAS	247	8	16	4	38	136	11	34
LOUISIANA	855	61	31	29	89	559	38	48
OKLAHOMA	556	43	39	14	114	251	27	68
TEXAS	3,227	364	224	77	603	1,203	266	490
MOUNTAIN	2,422	387	199	112	301	772	185	466
ARIZONA	534	83	40	23	63	156	44	125
COLORADO	487	97	40	18	83	129	47	73
IDAHO	151	6	15	8	21	50	19	32
MONTANA	158	19	22	1	34	41	8	33
NEVADA	129	11	11	15	13	51	0	28
NEW MEXICO	473	98	36	17	48	166	31	77
UTAH	350	53	24	9	21	146	24	73
WYOMING	140	20	11	21	18	33	12	25
PACIFIC	14,850	2,116	1,622	421	2,279	4,234	1,451	2,727
ALASKA	52	4	5	2	5	13	9	14
CALIFORNIA	11,935	1,870	1,413	324	1,904	2,916	1,257	2,251
HAWAII	340	9	8	4	26	185	22	86
OREGON	1,176	92	76	31	204	486	106	181
WASHINGTON	1,347	141	120	60	140	634	57	195
OUTLYING AREAS	847	29	85	11	120	281	107	214

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-38. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION, STATUS, AND SEX: JANUARY 1981

DIVISION AND STATE	FULL TIME					PART TIME				
	TOTAL	MEN		WOMEN		TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
TOTAL, ALL INSTITUTIONS ...	258,849	212,510	82.1%	46,339	17.9%	74,559	55,495	74.4%	19,064	25.6%
NEW ENGLAND	21,375	17,333	81.1	4,042	18.9	6,414	4,831	75.3	1,583	24.7
CONNECTICUT	4,663	3,609	77.4	1,054	22.6	1,521	1,062	69.8	459	30.2
MAINE	837	735	87.8	102	12.2	186	121	65.1	65	34.9
MASSACHUSETTS	12,870	10,427	81.0	2,443	19.0	4,078	3,169	77.7	909	22.3
NEW HAMPSHIRE	878	762	86.8	116	13.2	388	306	78.9	82	21.1
RHODE ISLAND	1,184	994	84.0	190	16.0	123	98	79.7	25	20.3
VERMONT	943	806	85.5	137	14.5	118	75	63.6	43	36.4
MIDDLE ATLANTIC	43,782	35,673	81.5	8,109	18.5	15,220	11,529	75.7	3,691	24.3
NEW JERSEY	5,766	4,503	78.1	1,263	21.9	2,232	1,715	76.8	517	23.2
NEW YORK	25,236	20,491	81.2	4,745	18.8	8,948	6,722	75.1	2,226	24.9
PENNSYLVANIA	12,780	10,679	83.6	2,101	16.4	4,040	3,092	76.5	948	23.5
EAST NORTH CENTRAL	43,245	35,133	81.2	8,112	18.8	13,700	9,764	71.3	3,936	28.7
ILLINOIS	12,708	10,097	79.5	2,611	20.5	3,701	2,738	74.0	963	26.0
INDIANA	4,775	4,121	86.3	654	13.7	1,079	795	73.7	284	26.3
MICHIGAN	9,108	7,291	80.1	1,817	19.9	3,007	2,084	69.3	923	30.7
OHIO	9,597	8,002	83.4	1,595	16.6	4,409	3,160	71.7	1,249	28.3
WISCONSIN	7,057	5,622	79.7	1,435	20.3	1,504	987	65.6	517	34.4
WEST NORTH CENTRAL	21,419	18,139	84.7	3,280	15.3	3,915	2,784	71.1	1,131	28.9
IOWA	4,260	3,562	83.6	698	16.4	727	474	65.2	253	34.8
KANSAS	3,335	2,825	84.7	510	15.3	719	495	68.8	224	31.2
MINNESOTA	4,607	3,878	84.2	729	15.8	895	632	70.6	263	29.4
MISSOURI	5,580	4,652	83.4	928	16.6	1,003	758	75.6	245	24.4
NEBRASKA	1,848	1,643	88.9	205	11.1	389	298	76.6	91	23.4
NORTH DAKOTA	923	833	90.2	90	9.8	71	53	74.6	18	25.4
SOUTH DAKOTA	866	746	86.1	120	13.9	111	74	66.7	37	33.3
SOUTH ATLANTIC	42,049	34,190	81.3	7,859	18.7	9,532	7,166	75.2	2,366	24.8
DELAWARE	713	603	84.6	110	15.4	23	11	47.8	12	52.2
DISTRICT OF COLUMBIA	2,957	2,226	75.3	731	24.7	1,627	1,252	77.0	375	23.0
FLORIDA	7,219	5,887	81.5	1,332	18.5	2,245	1,717	76.5	528	23.5
GEORGIA	5,264	4,418	83.9	846	16.1	834	652	78.2	182	21.8
MARYLAND	7,158	5,780	80.7	1,378	19.3	1,920	1,455	75.8	465	24.2
NORTH CAROLINA	7,596	6,328	83.3	1,268	16.7	918	648	70.6	270	29.4
SOUTH CAROLINA	3,647	2,854	78.3	793	21.7	588	467	79.4	121	20.6
VIRGINIA	5,719	4,656	81.4	1,063	18.6	1,040	724	69.6	316	30.4
WEST VIRGINIA	1,776	1,438	81.0	338	19.0	337	240	71.2	97	28.8
EAST SOUTH CENTRAL	14,284	11,771	82.4	2,513	17.6	2,774	2,181	78.6	593	21.4
ALABAMA	3,761	3,186	84.7	575	15.3	764	587	76.8	177	23.2
KENTUCKY	3,501	2,833	80.9	668	19.1	635	490	77.2	145	22.8
MISSISSIPPI	2,100	1,728	82.3	372	17.7	298	229	76.8	69	23.2
TENNESSEE	4,922	4,024	81.8	898	18.2	1,077	875	81.2	202	18.8
WEST SOUTH CENTRAL	24,713	20,188	81.7	4,525	18.3	4,885	3,833	78.5	1,052	21.5
ARKANSAS	2,052	1,681	81.9	371	18.1	247	179	72.5	68	27.5
LOUISIANA	4,632	3,661	79.0	971	21.0	855	635	74.3	220	25.7
OKLAHOMA	2,866	2,476	86.4	390	13.6	556	463	83.3	93	16.7
TEXAS	15,163	12,370	81.6	2,793	18.4	3,227	2,556	79.2	671	20.8
MOUNTAIN	15,141	12,781	84.4	2,360	15.6	2,422	1,764	72.8	658	27.2
ARIZONA	2,832	2,366	83.5	466	16.5	534	406	76.0	128	24.0
COLORADO	4,072	3,569	87.6	503	12.4	487	348	71.5	139	28.5
IDAHO	1,032	913	88.5	119	11.5	151	90	59.6	61	40.4
MONTANA	918	784	85.4	134	14.6	158	108	68.4	50	31.6
NEVADA	401	358	89.3	43	10.7	129	106	82.2	23	17.8
NEW MEXICO	2,222	1,762	79.3	460	20.7	473	335	70.8	138	29.2
UTAH	3,034	2,462	81.1	572	18.9	350	265	75.7	85	24.3
WYOMING	630	567	90.0	63	10.0	140	106	75.7	34	24.3
PACIFIC	30,703	25,999	84.7	4,704	15.3	14,850	11,044	74.4	3,806	25.6
ALASKA	316	275	87.0	41	13.0	52	38	73.1	14	26.9
CALIFORNIA	21,704	18,423	84.9	3,281	15.1	11,935	9,003	75.4	2,932	24.6
HAWAII	1,048	853	81.4	195	18.6	340	243	71.5	97	28.5
OREGON	3,186	2,669	83.8	517	16.2	1,176	783	66.6	393	33.4
WASHINGTON	4,449	3,779	84.9	670	15.1	1,347	977	72.5	370	27.5
OUTLYING AREAS	2,138	1,303	60.9	835	39.1	847	599	70.7	248	29.3

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-39. — SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT, STATUS, AND FULL-TIME-EQUIVALENTS: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL		FULL TIME		PART TIME		TOTAL FTE'S		FTE'S DEVOTED TO R&D	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
TOTAL	324,066	333,408	254,861	258,849	69,205	74,559	281,335	287,290	56,392	57,162
ENGINEERS	33,747	34,789	26,478	26,992	7,269	7,797	29,113	29,741	7,020	6,783
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,407	1,263	1,144	1,058	263	205	1,239	1,118	395	287
CHEMICAL ENGINEERS	2,352	2,285	1,886	1,901	466	384	2,088	2,041	560	511
CIVIL ENGINEERS	5,530	5,688	4,326	4,428	1,204	1,260	4,752	4,858	728	692
ELECTRICAL ENGINEERS	8,156	8,557	6,374	6,502	1,782	2,055	6,984	7,243	1,813	1,769
MECHANICAL ENGINEERS	6,078	6,322	4,820	4,931	1,258	1,391	5,279	5,416	946	886
OTHER ENGINEERS	10,224	10,674	7,928	8,172	2,296	2,502	8,771	9,063	2,578	2,641
PHYSICAL SCIENTISTS	33,553	34,059	27,994	28,173	5,559	5,886	30,481	30,725	7,072	7,133
ASTRONOMERS	953	1,062	816	897	137	165	860	951	366	369
CHEMISTS	17,611	18,080	14,328	14,755	3,283	3,325	15,890	16,258	3,030	3,430
PHYSICISTS	13,008	12,910	11,326	11,014	1,682	1,896	12,018	11,767	2,931	2,587
OTHER PHYSICAL SCIENTISTS	1,981	2,007	1,524	1,507	457	500	1,715	1,750	746	746
ENVIRONMENTAL SCIENTISTS	9,819	10,026	8,336	8,551	1,483	1,475	8,972	9,138	2,712	2,882
ATMOSPHERIC SCIENTISTS	943	918	793	763	150	155	842	813	426	397
EARTH SCIENTISTS	6,573	6,626	5,556	5,632	1,017	994	6,038	6,041	1,179	1,243
OCEANOGRAPHERS	1,539	1,606	1,386	1,465	153	141	1,430	1,503	845	989
OTHER ENVIRONMENTAL SCIENTISTS	764	876	601	691	163	185	662	782	261	254
MATHEMATICAL AND COMPUTER SCIENTISTS	35,964	38,900	26,036	27,091	9,928	11,809	30,174	32,093	2,101	2,114
MATHEMATICIANS	27,087	28,536	19,922	20,224	7,165	8,312	23,024	23,877	1,346	1,357
COMPUTER SCIENTISTS	8,877	10,364	6,114	6,867	2,763	3,497	7,151	8,216	756	758
LIFE SCIENTISTS	133,640	137,238	108,114	110,059	25,526	27,179	117,135	119,712	32,020	32,856
AGRICULTURAL SCIENTISTS	15,888	15,894	14,432	14,356	1,456	1,540	14,849	15,044	5,677	5,736
BIOLOGICAL SCIENTISTS	44,809	46,292	38,725	39,866	6,084	6,426	41,219	42,737	12,263	12,840
MEDICAL SCIENTISTS	67,119	68,534	50,316	50,707	16,803	17,827	55,928	56,332	13,389	13,648
OTHER LIFE SCIENTISTS	5,824	6,518	4,641	5,132	1,183	1,386	5,142	5,598	691	632
PSYCHOLOGISTS	23,257	23,341	16,751	16,820	6,506	6,521	19,310	19,259	1,637	1,603
SOCIAL SCIENTISTS	54,086	55,055	41,152	41,163	12,934	13,892	46,153	46,622	3,834	3,792
ECONOMISTS	14,683	15,034	11,101	11,201	3,582	3,833	12,486	12,674	1,384	1,317
POLITICAL SCIENTISTS	11,194	11,560	8,768	8,992	2,426	2,568	9,748	9,988	583	593
SOCIOLOGISTS	14,500	14,635	10,857	10,706	3,643	3,929	12,296	12,453	799	783
OTHER SOCIAL SCIENTISTS	13,709	13,826	10,426	10,264	3,283	3,562	11,626	11,506	1,071	1,098

NOTE: FTE DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-40. — SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT, STATUS, AND FULL-TIME-EQUIVALENTS: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL		FULL TIME		PART TIME		TOTAL FTE'S		FTE'S DEVOTED TO R&D	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
TOTAL	217,511	222,985	179,475	182,464	38,036	40,521	192,573	196,175	54,735	55,325
ENGINEERS	24,476	24,988	20,468	20,862	4,008	4,126	21,826	22,121	6,874	6,642
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,113	961	945	846	168	115	1,003	876	387	277
CHEMICAL ENGINEERS	2,070	1,959	1,690	1,683	380	276	1,855	1,779	552	503
CIVIL ENGINEERS	3,796	3,828	3,176	3,227	620	601	3,380	3,395	708	671
ELECTRICAL ENGINEERS	5,479	5,629	4,671	4,731	808	898	4,902	4,986	1,769	1,730
MECHANICAL ENGINEERS	4,001	4,153	3,409	3,504	592	649	3,598	3,698	915	853
OTHER ENGINEERS	8,017	8,458	6,577	6,871	1,440	1,587	7,088	7,385	2,541	2,609
PHYSICAL SCIENTISTS	19,194	19,476	16,749	16,937	2,445	2,539	17,695	17,826	6,765	6,750
ASTRONOMERS	735	798	685	735	50	63	682	729	362	365
CHEMISTS	9,200	9,610	7,761	8,241	1,439	1,369	8,363	8,761	2,848	3,201
PHYSICISTS	7,976	7,786	7,265	6,952	711	834	7,483	7,198	2,810	2,474
OTHER PHYSICAL SCIENTISTS	1,283	1,282	1,038	1,009	245	273	1,167	1,137	744	710
ENVIRONMENTAL SCIENTISTS	6,733	6,921	5,913	6,136	820	785	6,212	6,358	2,601	2,769
ATMOSPHERIC SCIENTISTS	804	768	701	669	103	99	731	691	423	392
EARTH SCIENTISTS	4,074	4,221	3,562	3,731	512	490	3,767	3,878	1,100	1,175
OCEANOGRAPHERS	1,362	1,436	1,257	1,337	105	99	1,281	1,352	827	965
OTHER ENVIRONMENTAL SCIENTISTS	493	496	393	399	100	97	433	437	250	237
MATHEMATICAL AND COMPUTER SCIENTISTS	15,587	16,520	12,794	13,379	2,793	3,141	13,843	14,515	1,931	1,933
MATHEMATICIANS	11,035	11,437	9,135	9,368	1,900	2,069	9,953	10,182	1,219	1,228
COMPUTER SCIENTISTS	4,552	5,083	3,659	4,011	893	1,072	3,891	4,333	713	706
LIFE SCIENTISTS	113,538	116,284	92,693	94,175	20,845	22,109	99,663	101,587	31,544	32,340
AGRICULTURAL SCIENTISTS	13,498	13,496	12,549	12,458	949	1,038	12,801	12,918	5,553	5,620
BIOLOGICAL SCIENTISTS	31,340	32,866	28,133	29,353	3,207	3,513	29,291	30,806	11,949	12,480
MEDICAL SCIENTISTS	64,182	65,266	48,411	48,647	15,771	16,619	53,594	53,825	13,360	13,625
OTHER LIFE SCIENTISTS	4,518	4,656	3,600	3,717	918	939	3,979	4,037	682	615
PSYCHOLOGISTS	10,182	10,396	8,042	8,192	2,140	2,204	8,807	8,921	1,485	1,455
SOCIAL SCIENTISTS	27,801	28,400	22,816	22,783	4,985	5,617	24,528	24,847	3,536	3,436
ECONOMISTS	8,087	8,190	6,687	6,676	1,400	1,514	7,127	7,196	1,320	1,246
POLITICAL SCIENTISTS	5,372	5,595	4,350	4,566	1,022	1,029	4,715	4,918	526	528
SOCIOLOGISTS	6,308	6,607	5,189	5,184	1,119	1,423	5,605	5,821	695	657
OTHER SOCIAL SCIENTISTS	8,034	8,008	6,590	6,357	1,444	1,651	7,081	6,912	996	1,005

NOTE: FTE DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-41. — SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT, STATUS, AND FULL-TIME-EQUIVALENTS: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL		FULL TIME		PART TIME		TOTAL FTE'S		FTE'S DEVOTED TO R&D	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
TOTAL	147,636	150,902	123,958	126,129	23,678	24,773	131,716	133,945	33,803	33,967
ENGINEERS	17,185	17,643	14,430	14,809	2,755	2,834	15,360	15,645	3,952	3,794
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	574	549	501	499	73	50	519	506	134	95
CHEMICAL ENGINEERS	1,500	1,393	1,199	1,181	301	212	1,334	1,244	370	303
CIVIL ENGINEERS	2,944	2,944	2,510	2,547	434	397	2,651	2,659	516	509
ELECTRICAL ENGINEERS	3,195	3,258	2,720	2,761	475	497	2,848	2,890	678	627
MECHANICAL ENGINEERS	2,732	2,834	2,366	2,427	366	407	2,482	2,539	470	420
OTHER ENGINEERS	6,240	6,665	5,134	5,394	1,106	1,271	5,527	5,805	1,783	1,840
PHYSICAL SCIENTISTS	12,641	12,793	10,917	11,040	1,724	1,753	11,532	11,591	3,757	3,709
ASTRONOMERS	496	539	465	493	31	46	452	482	247	216
CHEMISTS	6,394	6,480	5,278	5,441	1,116	1,039	5,725	5,813	1,628	1,690
PHYSICISTS	5,021	5,107	4,539	4,545	482	562	4,661	4,686	1,396	1,365
OTHER PHYSICAL SCIENTISTS	730	667	635	561	95	106	694	609	485	437
ENVIRONMENTAL SCIENTISTS	5,265	5,404	4,638	4,815	627	589	4,862	4,953	2,024	2,031
ATMOSPHERIC SCIENTISTS	685	674	590	580	95	94	617	599	363	344
EARTH SCIENTISTS	3,307	3,420	2,896	3,037	411	383	3,058	3,144	869	898
OCEANOGRAPHERS	978	987	894	910	84	77	909	907	624	611
OTHER ENVIRONMENTAL SCIENTISTS	295	323	258	288	37	35	278	303	168	178
MATHEMATICAL AND COMPUTER SCIENTISTS	11,261	11,892	9,578	9,934	1,683	1,958	10,252	10,635	988	973
MATHEMATICIANS	8,089	8,417	6,831	7,012	1,258	1,405	7,376	7,560	553	560
COMPUTER SCIENTISTS	3,172	3,475	2,747	2,922	425	553	2,876	3,075	436	414
LIFE SCIENTISTS	74,081	75,565	61,444	62,568	12,637	12,997	65,311	66,601	19,766	20,228
AGRICULTURAL SCIENTISTS	13,020	12,998	12,092	11,990	928	1,008	12,333	12,434	5,337	5,401
BIOLOGICAL SCIENTISTS	20,788	21,674	18,565	19,179	2,223	2,495	19,330	20,111	7,025	7,362
MEDICAL SCIENTISTS	37,307	37,264	28,428	28,522	8,879	8,742	31,034	30,929	7,031	7,138
OTHER LIFE SCIENTISTS	2,966	3,629	2,359	2,877	607	752	2,615	3,127	373	327
PSYCHOLOGISTS	6,953	6,974	5,776	5,863	1,177	1,111	6,204	6,194	920	866
SOCIAL SCIENTISTS	20,250	20,631	17,175	17,100	3,075	3,531	18,196	18,326	2,397	2,366
ECONOMISTS	5,663	5,735	4,876	4,868	787	867	5,106	5,129	974	921
POLITICAL SCIENTISTS	3,482	3,716	2,983	3,199	499	517	3,165	3,362	296	309
SOCIOLOGISTS	4,749	4,951	3,987	3,964	762	987	4,251	4,420	455	452
OTHER SOCIAL SCIENTISTS	6,356	6,229	5,329	5,069	1,027	1,160	5,674	5,415	672	684

NOTE: FTE DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-42. — SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT, STATUS, AND FULL-TIME-EQUIVALENTS: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL		FULL TIME		PART TIME		TOTAL FTE'S		FTE'S DEVOTED TO R&D	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
TOTAL	69,875	72,083	55,517	56,335	14,358	15,748	60,857	62,230	20,932	21,358
ENGINEERS	7,291	7,345	6,038	6,053	1,253	1,292	6,466	6,476	2,922	2,848
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	539	412	444	347	95	65	484	370	253	182
CHEMICAL ENGINEERS	570	566	491	502	79	64	521	535	182	200
CIVIL ENGINEERS	852	884	666	680	186	204	729	736	192	162
ELECTRICAL ENGINEERS	2,284	2,371	1,951	1,970	333	401	2,054	2,096	1,091	1,103
MECHANICAL ENGINEERS	1,269	1,319	1,043	1,077	226	242	1,116	1,159	445	433
OTHER ENGINEERS	1,777	1,793	1,443	1,477	334	316	1,561	1,580	758	769
PHYSICAL SCIENTISTS	6,553	6,683	5,832	5,897	721	786	6,163	6,235	3,008	3,041
ASTRONOMERS	239	259	220	242	19	17	230	247	115	149
CHEMISTS	2,806	3,130	2,483	2,800	323	330	2,638	2,948	1,220	1,511
PHYSICISTS	2,955	2,679	2,726	2,407	229	272	2,822	2,512	1,414	1,109
OTHER PHYSICAL SCIENTISTS	553	615	403	448	150	167	473	528	259	273
ENVIRONMENTAL SCIENTISTS	1,468	1,517	1,275	1,321	193	196	1,350	1,405	577	738
ATMOSPHERIC SCIENTISTS	119	94	111	89	8	5	114	92	60	48
EARTH SCIENTISTS	767	801	666	694	101	107	709	734	231	277
OCEANOGRAPHERS	384	449	363	427	21	22	372	445	203	354
OTHER ENVIRONMENTAL SCIENTISTS	198	173	135	111	63	62	155	134	82	59
MATHEMATICAL AND COMPUTER SCIENTISTS	4,326	4,628	3,216	3,445	1,110	1,183	3,591	3,880	943	960
MATHEMATICIANS	2,946	3,020	2,304	2,356	642	664	2,577	2,622	666	668
COMPUTER SCIENTISTS	1,380	1,608	912	1,089	468	519	1,015	1,258	277	292
LIFE SCIENTISTS	39,457	40,719	31,249	31,607	8,208	9,112	34,352	34,986	11,778	12,112
AGRICULTURAL SCIENTISTS	478	498	457	468	21	30	468	484	216	219
BIOLOGICAL SCIENTISTS	10,552	11,192	9,568	10,174	984	1,018	9,961	10,695	4,924	5,118
MEDICAL SCIENTISTS	26,875	28,002	19,983	20,125	6,892	7,877	22,560	22,896	6,329	6,487
OTHER LIFE SCIENTISTS	1,552	1,027	1,241	840	311	187	1,364	910	309	288
PSYCHOLOGISTS	3,229	3,422	2,266	2,329	963	1,093	2,603	2,727	565	589
SOCIAL SCIENTISTS	7,551	7,769	5,641	5,683	1,910	2,086	6,332	6,521	1,139	1,070
ECONOMISTS	2,424	2,455	1,811	1,808	613	647	2,021	2,067	346	325
POLITICAL SCIENTISTS	1,890	1,879	1,367	1,367	523	512	1,550	1,556	230	219
SOCIOLOGISTS	1,559	1,656	1,202	1,220	357	436	1,354	1,401	240	205
OTHER SOCIAL SCIENTISTS	1,678	1,779	1,261	1,288	417	491	1,407	1,497	324	321

NOTE: FTE DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-43. — SCIENTISTS AND ENGINEERS EMPLOYED AT FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD OF EMPLOYMENT, STATUS, AND FULL-TIME-EQUIVALENTS: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL		FULL TIME		PART TIME		TOTAL FTE'S		FTE'S DEVOTED TO R&D	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
TOTAL	15,080	15,296	14,706	14,793	374	503	14,802	15,033	14,793	14,989
ENGINEERS	6,515	6,609	6,469	6,474	46	135	6,474	6,556	6,470	6,552
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	240	247	240	238	0	9	240	247	240	247
CHEMICAL ENGINEERS	276	297	272	290	4	7	272	290	272	290
CIVIL ENGINEERS	211	227	206	224	5	3	207	226	207	226
ELECTRICAL ENGINEERS	2,229	2,301	2,210	2,262	19	39	2,217	2,285	2,217	2,285
MECHANICAL ENGINEERS	1,586	1,590	1,580	1,551	6	39	1,578	1,574	1,576	1,572
OTHER ENGINEERS	1,973	1,947	1,961	1,909	12	38	1,960	1,934	1,958	1,932
PHYSICAL SCIENTISTS	5,620	5,512	5,453	5,331	167	181	5,484	5,401	5,484	5,398
ASTRONOMERS	152	151	148	150	4	1	150	151	150	151
CHEMISTS	1,454	1,423	1,402	1,375	52	48	1,398	1,383	1,398	1,381
PHYSICISTS	3,463	3,503	3,370	3,383	93	120	3,395	3,435	3,395	3,433
OTHER PHYSICAL SCIENTISTS	551	435	533	423	18	12	542	433	542	433
ENVIRONMENTAL SCIENTISTS	709	853	676	818	33	35	692	838	692	836
ATMOSPHERIC SCIENTISTS	101	217	100	207	1	10	101	214	101	214
EARTH SCIENTISTS	294	297	273	278	21	19	282	288	282	287
OCEANOGRAPHERS	16	26	16	25	0	1	15	25	15	25
OTHER ENVIRONMENTAL SCIENTISTS	298	313	287	308	11	5	294	311	294	310
MATHEMATICAL AND COMPUTER SCIENTISTS	1,383	1,444	1,315	1,342	68	102	1,334	1,392	1,330	1,387
MATHEMATICIANS	678	702	658	667	20	35	659	689	659	688
COMPUTER SCIENTISTS	705	7[illegible]	657	675	48	67	676	704	672	700
LIFE SCIENTISTS	727	754	675	713	52	41	694	727	694	721
AGRICULTURAL SCIENTISTS	[illegible]	5	1	5	0	0	1	5	1	5
BIOLOGICAL SCIENTISTS	498	523	468	495	30	28	475	501	475	495
MEDICAL SCIENTISTS	94	70	79	65	15	5	86	67	86	67
OTHER LIFE SCIENTISTS	134	156	127	148	7	8	132	154	132	154
PSYCHOLOGISTS	5	9	5	8	0	1	5	9	4	6
SOCIAL SCIENTISTS	121	115	113	107	8	8	118	111	118	90
ECONOMISTS	83	73	79	69	4	4	82	71	82	56
POLITICAL SCIENTISTS	13	14	13	14	0	0	13	14	13	12
SOCIOLOGISTS	1	5	1	4	0	1	1	5	1	3
OTHER SOCIAL SCIENTISTS	24	23	20	20	4	3	22	22	22	19

NOTE: FTE DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-44. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	281,335	287,290	2.1%	195,165	199,040	2.0%	86,170	88,250	2.4%
ENGINEERS	29,113	29,741	2.2	21,286	21,756	2.2	7,827	7,985	2.0
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,239	1,118	-9.8	709	682	-3.8	530	436	-17.7
CHEMICAL ENGINEERS	2,088	2,041	-2.3	1,496	1,436	-4.0	592	605	2.2
CIVIL ENGINEERS	4,752	4,858	2.2	3,796	3,869	1.9	956	989	3.5
ELECTRICAL ENGINEERS	6,984	7,243	3.7	4,517	4,676	3.5	2,467	2,567	4.1
MECHANICAL ENGINEERS	5,279	5,416	2.6	3,799	3,852	1.4	1,480	1,564	5.7
OTHER ENGINEERS	8,771	9,063	3.3	6,970	7,237	3.8	1,801	1,826	1.4
PHYSICAL SCIENTISTS	30,481	30,725	.8	20,033	20,152	.6	10,448	10,573	1.2
ASTRONOMERS	860	951	10.6	594	660	11.1	266	291	9.4
CHEMISTS	15,890	16,258	2.3	10,584	10,627	.4	5,306	5,631	6.1
PHYSICISTS	12,018	11,767	-2.1	7,711	7,752	.5	4,307	4,015	-6.8
OTHER PHYSICAL SCIENTISTS	1,715	1,750	2.0	1,144	1,111	-2.9	571	639	11.9
ENVIRONMENTAL SCIENTISTS	8,972	9,138	1.9	7,110	7,236	1.8	1,862	1,902	2.1
ATMOSPHERIC SCIENTISTS	842	813	-3.4	712	704	-1.1	130	109	-16.2
EARTH SCIENTISTS	6,038	6,041	.0	4,866	4,878	.2	1,172	1,163	-.8
OCEANOGRAPHERS	1,430	1,503	5.1	1,049	1,048	-.1	381	455	19.4
OTHER ENVIRONMENTAL SCIENTISTS	662	782	18.1	483	607	25.7	179	175	-2.2
MATHEMATICAL AND COMPUTER SCIENTISTS	30,174	32,093	6.4	22,483	23,782	5.8	7,691	8,311	8.1
MATHEMATICIANS	23,024	23,877	3.7	17,099	17,714	3.6	5,925	6,163	4.0
COMPUTER SCIENTISTS	7,151	8,216	14.9	5,383	6,069	12.7	1,768	2,147	21.4
LIFE SCIENTISTS	117,135	119,712	2.2	78,071	79,743	2.1	39,064	39,969	2.3
AGRICULTURAL SCIENTISTS	14,849	15,044	1.3	14,229	14,398	1.2	620	646	4.2
BIOLOGICAL SCIENTISTS	41,219	42,737	3.7	27,519	28,233	2.6	13,700	14,504	5.9
MEDICAL SCIENTISTS	55,928	56,332	.7	32,772	32,748	-.1	23,156	23,584	1.8
OTHER LIFE SCIENTISTS	5,142	5,598	8.9	3,553	4,364	22.8	1,589	1,234	-22.3
PSYCHOLOGISTS	19,310	19,259	-.3	13,466	13,360	-.8	5,844	5,899	.9
SOCIAL SCIENTISTS	46,153	46,622	1.0	32,719	33,012	.9	13,434	13,610	1.3
ECONOMISTS	12,486	12,674	1.5	8,345	8,432	1.0	4,141	4,242	2.4
POLITICAL SCIENTISTS	9,748	9,988	2.5	6,465	6,681	3.3	3,283	3,307	.7
SOCIOLOGISTS	12,296	12,453	1.3	8,643	8,770	1.5	3,653	3,683	.8
OTHER SOCIAL SCIENTISTS	11,626	11,506	-1.0	9,267	9,127	-1.5	2,359	2,379	.8

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-45. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	192,573	196,175	1.9%	131,716	133,945	1.7%	60,857	62,230	2.3%
ENGINEERS	21,826	22,121	1.4	15,360	15,645	1.9	6,466	6,476	.2
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,003	876	-12.7	519	506	-2.5	484	370	-23.6
CHEMICAL ENGINEERS	1,855	1,779	-4.1	1,334	1,244	-6.7	521	535	2.7
CIVIL ENGINEERS	3,380	3,395	.4	2,651	2,659	.3	729	736	1.0
ELECTRICAL ENGINEERS	4,902	4,986	1.7	2,848	2,890	1.5	2,054	2,096	2.0
MECHANICAL ENGINEERS	3,598	3,698	2.8	2,482	2,539	2.3	1,116	1,159	3.9
OTHER ENGINEERS	7,088	7,385	4.2	5,527	5,805	5.0	1,561	1,580	1.2
PHYSICAL SCIENTISTS	17,695	17,826	.7	11,532	11,591	.5	6,163	6,235	1.2
ASTRONOMERS	682	729	6.9	452	482	6.6	230	247	7.4
CHEMISTS	8,363	8,761	4.8	5,725	5,813	1.5	2,638	2,948	11.8
PHYSICISTS	7,483	7,198	-3.8	4,661	4,686	.5	2,822	2,512	-11.0
OTHER PHYSICAL SCIENTISTS	1,167	1,137	-2.6	694	609	-12.2	473	528	11.6
ENVIRONMENTAL SCIENTISTS	6,212	6,358	2.4	4,862	4,953	1.9	1,350	1,405	4.1
ATMOSPHERIC SCIENTISTS	731	691	-5.5	617	599	-2.9	114	92	-19.3
EARTH SCIENTISTS	3,767	3,878	2.9	3,058	3,144	2.8	709	734	3.5
OCEANOGRAPHERS	1,281	1,352	5.5	909	907	-.2	372	445	19.6
OTHER ENVIRONMENTAL SCIENTISTS	433	437	.9	278	303	9.0	155	134	-13.5
MATHEMATICAL AND COMPUTER SCIENTISTS	13,843	14,515	4.9	10,252	10,635	3.7	3,591	3,880	8.0
MATHEMATICIANS	9,953	10,182	2.3	7,376	7,560	2.5	2,577	2,622	1.7
COMPUTER SCIENTISTS	3,891	4,333	11.4	2,876	3,075	6.9	1,015	1,258	23.9
LIFE SCIENTISTS	99,663	101,587	1.9	65,311	66,601	2.0	34,352	34,986	1.8
AGRICULTURAL SCIENTISTS	12,801	12,918	.9	12,333	12,434	.8	468	484	3.4
BIOLOGICAL SCIENTISTS	29,291	30,806	5.2	19,330	20,111	4.0	9,961	10,695	7.4
MEDICAL SCIENTISTS	53,594	53,825	.4	31,034	30,929	-.3	22,560	22,896	1.5
OTHER LIFE SCIENTISTS	3,979	4,037	1.5	2,615	3,127	19.6	1,364	910	-33.3
PSYCHOLOGISTS	8,807	8,921	1.3	6,204	6,194	-.2	2,603	2,727	4.8
SOCIAL SCIENTISTS	24,528	24,847	1.3	18,196	18,326	.7	6,332	6,521	3.0
ECONOMISTS	7,127	7,196	1.0	5,106	5,129	.5	2,021	2,067	2.3
POLITICAL SCIENTISTS	4,715	4,918	4.3	3,165	3,362	6.2	1,550	1,556	.4
SOCIOLOGISTS	5,605	5,821	3.9	4,251	4,420	4.0	1,354	1,401	3.5
OTHER SOCIAL SCIENTISTS	7,081	6,912	-2.4	5,674	5,415	-4.6	1,407	1,497	6.4

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-46. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	56,392	57,162	1.4%	35,023	35,277	0.7%	21,369	21,885	2.4%
ENGINEERS	7,020	6,783	-3.4	4,052	3,877	-4.3	2,968	2,906	-2.1
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	395	287	-27.3	141	102	-27.7	254	185	-27.2
CHEMICAL ENGINEERS	560	511	-8.8	375	308	-17.9	185	203	9.7
CIVIL ENGINEERS	728	692	-4.9	534	524	-1.9	194	168	-13.4
ELECTRICAL ENGINEERS	1,813	1,769	-2.4	705	651	-7.7	1,108	1,118	.9
MECHANICAL ENGINEERS	946	886	-6.3	495	442	-10.7	451	444	-1.6
OTHER ENGINEERS	2,578	2,641	2.4	1,803	1,851	2.7	775	790	1.9
PHYSICAL SCIENTISTS	7,072	7,133	.9	3,934	3,950	.4	3,138	3,183	1.4
ASTRONOMERS	366	369	.8	248	218	-12.1	118	151	28.0
CHEMISTS	3,030	3,430	13.2	1,734	1,830	5.5	1,296	1,600	23.5
PHYSICISTS	2,931	2,587	-11.7	1,466	1,428	-2.6	1,465	1,159	-20.9
OTHER PHYSICAL SCIENTISTS	746	746	.0	487	473	-2.9	259	273	5.4
ENVIRONMENTAL SCIENTISTS	2,712	2,882	6.3	2,115	2,126	.5	597	756	26.6
ATMOSPHERIC SCIENTISTS	426	397	-6.8	365	348	-4.7	61	49	-19.7
EARTH SCIENTISTS	1,179	1,243	5.4	933	955	2.4	246	288	17.1
OCEANOGRAPHERS	845	989	17.0	639	631	-1.3	206	358	73.8
OTHER ENVIRONMENTAL SCIENTISTS	261	254	-2.7	178	192	7.9	83	62	-25.3
MATHEMATICAL AND COMPUTER SCIENTISTS	2,101	2,114	.6	1,117	1,109	-.7	984	1,005	2.1
MATHEMATICIANS	1,346	1,357	.8	649	655	.9	697	702	.7
COMPUTER SCIENTISTS	756	758	.3	469	455	-3.0	287	303	5.6
LIFE SCIENTISTS	32,020	32,856	2.6	20,150	20,603	2.2	11,870	12,253	3.2
AGRICULTURAL SCIENTISTS	5,677	5,736	1.0	5,454	5,512	1.1	223	224	.4
BIOLOGICAL SCIENTISTS	12,263	12,840	4.7	7,262	7,598	4.6	5,001	5,242	4.8
MEDICAL SCIENTISTS	13,389	13,648	1.9	7,052	7,152	1.4	6,337	6,496	2.5
OTHER LIFE SCIENTISTS	691	632	-8.5	382	342	-10.5	309	290	-6.1
PSYCHOLOGISTS	1,637	1,603	-2.1	1,018	974	-4.3	619	629	1.6
SOCIAL SCIENTISTS	3,834	3,792	-1.1	2,639	2,639	.0	1,195	1,153	-3.5
ECONOMISTS	1,384	1,317	-4.8	1,016	967	-4.8	368	350	-4.9
POLITICAL SCIENTISTS	583	593	1.7	339	354	4.4	244	239	-2.0
SOCIOLOGISTS	799	783	-2.0	543	555	2.2	256	228	-10.9
OTHER SOCIAL SCIENTISTS	1,071	1,098	2.5	742	762	2.7	329	336	2.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-47. — FULL-TIME-EQUIVALENT SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT AT DOCTORATE-GRANTING INSTITUTIONS BY FIELD OF EMPLOYMENT AND CONTROL: JANUARY 1980 AND JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL			PUBLIC			PRIVATE		
	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81	1980	1981	PERCENT CHANGE 1980-81
TOTAL	54,735	55,325	1.1%	33,803	33,967	0.5%	20,932	21,358	2.0%
ENGINEERS	6,874	6,642	-3.4	3,952	3,794	-4.0	2,922	2,848	-2.5
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	387	277	-28.4	134	95	-29.1	253	182	-28.1
CHEMICAL ENGINEERS	552	503	-8.9	370	303	-18.1	182	200	9.9
CIVIL ENGINEERS	708	671	-5.2	516	509	-1.4	192	162	-15.6
ELECTRICAL ENGINEERS	1,769	1,730	-2.2	678	627	-7.5	1,091	1,103	1.1
MECHANICAL ENGINEERS	915	853	-6.8	470	420	-10.6	445	433	-2.7
OTHER ENGINEERS	2,541	2,609	2.7	1,783	1,840	3.2	758	769	1.5
PHYSICAL SCIENTISTS	6,765	6,750	-.2	3,757	3,709	-1.3	3,008	3,041	1.1
ASTRONOMERS	362	365	.8	247	216	-12.6	115	149	29.6
CHEMISTS	2,848	3,201	12.4	1,628	1,690	3.8	1,220	1,511	23.9
PHYSICISTS	2,810	2,474	-12.0	1,396	1,365	-2.2	1,414	1,109	-21.6
OTHER PHYSICAL SCIENTISTS	744	710	-4.6	485	437	-9.9	259	273	5.4
ENVIRONMENTAL SCIENTISTS	2,601	2,769	6.5	2,024	2,031	.3	577	738	27.9
ATMOSPHERIC SCIENTISTS	423	392	-7.3	363	344	-5.2	60	48	-20.0
EARTH SCIENTISTS	1,100	1,175	6.8	869	898	3.3	231	277	19.9
OCEANOGRAPHERS	827	965	16.7	624	611	-2.1	203	354	74.4
OTHER ENVIRONMENTAL SCIENTISTS	250	237	-5.2	168	178	6.0	82	59	-28.0
MATHEMATICAL AND COMPUTER SCIENTISTS	1,931	1,933	.1	988	973	-1.5	943	960	1.8
MATHEMATICIANS	1,219	1,228	.7	553	560	1.3	666	668	.3
COMPUTER SCIENTISTS	713	706	-1.0	436	414	-5.0	277	292	5.4
LIFE SCIENTISTS	31,544	32,340	2.5	19,766	20,228	2.3	11,778	12,112	2.8
AGRICULTURAL SCIENTISTS	5,553	5,620	1.2	5,337	5,401	1.2	216	219	1.4
BIOLOGICAL SCIENTISTS	11,949	12,480	4.4	7,025	7,362	4.8	4,924	5,118	3.9
MEDICAL SCIENTISTS	13,360	13,625	2.0	7,031	7,138	1.5	6,329	6,487	2.5
OTHER LIFE SCIENTISTS	682	615	-9.8	373	327	-12.3	309	288	-6.8
PSYCHOLOGISTS	1,485	1,455	-2.0	920	866	-5.9	565	589	4.2
SOCIAL SCIENTISTS	3,536	3,436	-2.8	2,397	2,366	-1.3	1,139	1,070	-6.1
ECONOMISTS	1,320	1,246	-5.6	974	921	-5.4	346	325	-6.1
POLITICAL SCIENTISTS	526	528	.4	296	309	4.4	230	219	-4.8
SOCIOLOGISTS	695	657	-5.5	455	452	-.7	240	205	-14.6
OTHER SOCIAL SCIENTISTS	996	1,005	.9	672	684	1.8	324	321	-.9

NOTE: DETAIL MAY NOT ADD TO TOTAL BECAUSE OF ROUNDING.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-48. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND SEX: JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
TOTAL	258,849	212,510	82.1%	46,339	17.9%
ENGINEERS	26,992	26,190	97.0	802	3.0
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	1,058	1,036	97.9	22	2.1
CHEMICAL ENGINEERS	1,901	1,833	96.4	68	3.6
CIVIL ENGINEERS	4,428	4,295	97.0	133	3.0
ELECTRICAL ENGINEERS	6,502	6,378	98.1	124	1.9
MECHANICAL ENGINEERS	4,931	4,820	97.7	111	2.3
OTHER ENGINEERS	8,172	7,828	95.8	344	4.2
PHYSICAL SCIENTISTS	28,173	25,560	90.7	2,613	9.3
ASTRONOMERS	897	818	91.2	79	8.8
CHEMISTS	14,755	12,867	87.2	1,888	12.8
PHYSICISTS	11,014	10,524	95.6	490	4.4
OTHER PHYSICAL SCIENTISTS	1,507	1,351	89.6	156	10.4
ENVIRONMENTAL SCIENTISTS	8,551	7,809	91.3	742	8.7
ATMOSPHERIC SCIENTISTS	763	713	93.4	50	6.6
EARTH SCIENTISTS	5,632	5,209	92.5	423	7.5
OCEANOGRAPHERS	1,465	1,304	89.0	161	11.0
OTHER ENVIRONMENTAL SCIENTISTS	691	583	84.4	108	15.6
MATHEMATICAL AND COMPUTER SCIENTISTS	27,091	22,668	83.7	4,423	16.3
MATHEMATICIANS	20,224	16,914	83.6	3,310	16.4
COMPUTER SCIENTISTS	6,867	5,754	83.8	1,113	16.2
LIFE SCIENTISTS	110,059	84,504	76.8	25,555	23.2
AGRICULTURAL SCIENTISTS	14,354	13,009	90.6	1,345	9.4
BIOLOGICAL SCIENTISTS	39,866	31,186	78.2	8,680	21.8
MEDICAL SCIENTISTS	50,707	38,308	75.5	12,399	24.5
OTHER LIFE SCIENTISTS	5,132	2,001	39.0	3,131	61.0
PSYCHOLOGISTS	16,820	12,428	73.9	4,392	26.1
SOCIAL SCIENTISTS	41,163	33,351	81.0	7,812	19.0
ECONOMISTS	11,201	10,075	89.9	1,126	10.1
POLITICAL SCIENTISTS	8,992	7,825	87.0	1,167	13.0
SOCIOLOGISTS	10,706	7,768	72.6	2,938	27.4
OTHER SOCIAL SCIENTISTS	10,264	7,683	74.9	2,581	25.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-49. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD OF EMPLOYMENT AND SEX: JANUARY 1981

FIELD OF EMPLOYMENT	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
TOTAL	74,559	55,495	74.4%	19,064	25.6%
ENGINEERS	7,797	7,454	95.6	343	4.4
AERONAUTICAL AND ASTRONAUTICAL ENGINEERS	205	196	95.6	9	4.4
CHEMICAL ENGINEERS	384	351	91.4	33	8.6
CIVIL ENGINEERS	1,260	1,215	96.4	45	3.6
ELECTRICAL ENGINEERS	2,055	2,007	97.7	48	2.3
MECHANICAL ENGINEERS	1,391	1,343	96.5	48	3.5
OTHER ENGINEERS	2,502	2,342	93.6	160	6.4
PHYSICAL SCIENTISTS	5,886	4,536	77.1	1,350	22.9
ASTRONOMERS	165	139	84.2	26	15.8
CHEMISTS	3,325	2,305	69.3	1,020	30.7
PHYSICISTS	1,896	1,703	89.8	193	10.2
OTHER PHYSICAL SCIENTISTS	500	389	77.8	111	22.2
ENVIRONMENTAL SCIENTISTS	1,475	1,162	78.8	313	21.2
ATMOSPHERIC SCIENTISTS	155	135	87.1	20	12.9
EARTH SCIENTISTS	994	806	81.1	188	18.9
OCEANOGRAPHERS	141	97	68.8	44	31.2
OTHER ENVIRONMENTAL SCIENTISTS	185	124	67.0	61	33.0
MATHEMATICAL AND COMPUTER SCIENTISTS	11,809	8,496	71.9	3,313	28.1
MATHEMATICIANS	8,312	5,551	66.8	2,761	33.2
COMPUTER SCIENTISTS	3,497	2,945	84.2	552	15.8
LIFE SCIENTISTS	27,179	19,860	73.1	7,319	26.9
AGRICULTURAL SCIENTISTS	1,540	1,249	81.1	291	18.9
BIOLOGICAL SCIENTISTS	6,426	4,024	62.6	2,402	37.4
MEDICAL SCIENTISTS	17,827	13,972	78.4	3,855	21.6
OTHER LIFE SCIENTISTS	1,386	615	44.4	771	55.6
PSYCHOLOGISTS	6,521	3,912	60.0	2,609	40.0
SOCIAL SCIENTISTS	13,892	10,075	72.5	3,817	27.5
ECONOMISTS	3,833	3,300	86.1	533	13.9
POLITICAL SCIENTISTS	2,568	2,034	79.2	534	20.8
SOCIOLOGISTS	3,929	2,358	60.0	1,571	40.0
OTHER SOCIAL SCIENTISTS	3,562	2,383	66.9	1,179	33.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-50. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, CONTROL, AND SEX: JANUARY 1981

TYPE OF INSTITUTION AND CONTROL	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
ALL INSTITUTIONS	258,849	212,510	82.1%	46,339	17.9%
PUBLIC	180,771	148,688	82.3	32,083	17.7
PRIVATE	78,078	63,822	81.7	14,256	18.3
INSTITUTIONS GRANTING:					
DOCTORATE IN S&E	182,464	151,051	82.8	31,413	17.2
PUBLIC	126,129	104,526	82.9	21,603	17.1
PRIVATE	56,335	46,525	82.6	9,810	17.4
MASTER'S IN S&E	27,850	23,307	83.7	4,543	16.3
PUBLIC	21,856	18,396	84.2	3,460	15.8
PRIVATE	5,994	4,911	81.9	1,083	18.1
BACHELOR'S IN S&E	21,234	17,183	80.9	4,051	19.1
PUBLIC	7,098	5,969	84.1	1,129	15.9
PRIVATE	14,136	11,214	79.3	2,922	20.7
OTHER DEGREES	708	637	90.0	71	10.0
PUBLIC	449	417	92.9	32	7.1
PRIVATE	259	220	84.9	39	15.1
2-YEAR INSTITUTIONS	26,593	20,332	76.5	6,261	23.5
PUBLIC	25,239	19,380	76.8	5,859	23.2
PRIVATE	1,354	952	70.3	402	29.7

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-51. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES, BY TYPE OF INSTITUTION, CONTROL, AND SEX: JANUARY 1981

TYPE OF INSTITUTION AND CONTROL	TOTAL	MEN		WOMEN	
		NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL
ALL INSTITUTIONS	74,559	55,495	74.4%	19,064	25.6%
PUBLIC	49,209	36,004	73.2	13,205	26.8
PRIVATE	25,350	19,491	76.9	5,859	23.1
INSTITUTIONS GRANTING:					
DOCTORATE IN S&E	40,521	30,776	76.0	9,745	24.0
PUBLIC	24,773	18,073	73.0	6,700	27.0
PRIVATE	15,748	12,703	80.7	3,045	19.3
MASTER'S IN S&E	9,805	7,146	72.9	2,659	27.1
PUBLIC	6,360	4,639	72.9	1,721	27.1
PRIVATE	3,445	2,507	72.8	938	27.2
BACHELOR'S IN S&E	6,405	4,464	69.7	1,941	30.3
PUBLIC	1,354	943	69.6	411	30.4
PRIVATE	5,051	3,521	69.7	1,530	30.3
OTHER DEGREES	208	168	80.8	40	19.2
PUBLIC	71	58	81.7	13	18.3
PRIVATE	137	110	80.3	27	19.7
2-YEAR INSTITUTIONS	17,620	12,941	73.4	4,679	26.6
PUBLIC	16,651	12,291	73.8	4,360	26.2
PRIVATE	969	650	67.1	319	32.9

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-52. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1981

INSTITUTIONAL RANKING	WOMEN		MEN		TOTAL	
	1981	1980	1981	1980	1981	1980
TOTAL, ALL INSTITUTIONS	46,339	44,164	212,510	210,697	258,849	254,861
1 UNIV OF WIS-MADISON	759	751	2,384	2,376	3,143	3,127
2 HARVARD UNIVERSITY	694	596	3,167	3,078	3,861	3,674
3 UNIVERSITY OF MICHIGAN	620	799	2,001	1,875	2,621	2,674
4 LOUISIANA STATE UNIV	590	608	1,908	1,951	2,498	2,559
5 UNIVERSITY OF MINNESOTA	506	513	2,575	2,517	3,081	3,030
6 UNIVERSITY OF PITTSBURGH	484E	451I	1,219E	1,185I	1,703E	1,636
7 UNIVERSITY OF UTAH	444	199I	1,289	1,077I	1,733	1,276E
8 JOHNS HOPKINS UNIVERSITY	440	423	2,717	2,715	3,157	3,138
9 UNIV OF TEX CANCER CENTER	416I	410I	406I	400I	822I	810I
10 YALE UNIVERSITY	412I	417I	1,382I	1,427I	1,794	1,844
TOTAL, 1ST 10 INSTS.	5,365	5,167	19,048	18,601	24,413	23,768
11 COLUMBIA UNIV MAIN DIV	408	363	1,336	1,310	1,744	1,673
12 UNIVERSITY OF WASHINGTON	404	394	1,562	1,596	1,966	1,990
13 UNIVERSITY OF KENTUCKY	389	376	1,537	1,554	1,926	1,930
14 CORNELL UNIVERSITY	385	366	1,946	1,965	2,331	2,331
15 UNIV OF ILL URBANA	381	283	1,865	1,769	2,246	2,052
16 UNIVERSITY OF FLORIDA	371	357	1,711	1,706	2,082	2,063
17 OHIO STATE UNIVERSITY	370	588	1,680	1,954	2,050	2,542
18 UNIV OF TEXAS AT AUSTIN	345	334	1,354	1,323	1,699	1,657
19 MASS INST OF TECHNOLOGY	343	300	1,776	1,775	2,119	2,075
20 UNIVERSITY OF CONNECTICUT	330	287	963	949	1,293	1,236
TOTAL, 1ST 20 INSTS.	9,091	8,815	34,778	34,902	43,869	43,317
21 RUTGERS THE ST UNIV OF NJ	329	326	1,198	1,236	1,527	1,562
22 UNIVERSITY OF IOWA	311	279	1,277	1,274	1,588	1,553
23 NEW YORK UNIVERSITY	309	337	1,116	1,072	1,425	1,409
24 WAYNE STATE UNIVERSITY	303	305	753	756	1,056	1,061
25 WASHINGTON UNIVERSITY	303	294	1,177	1,157	1,480	1,451
26 DUKE UNIVERSITY	299	236	1,264	1,210	1,563	1,446
27 CUNY MT SINAI SCH OF MED	288I	276I	904I	866I	1,192I	1,142I
28 BOSTON UNIVERSITY	276	271	614	646	890	917
29 INDIANA UNIVERSITY	267	267	982	982	1,249	1,249
30 VIRGINIA COMMONWLTH UNIV	265	145	735	673	1,000	818
TOTAL, 1ST 30 INSTS.	12,041	11,951	44,798	44,374	56,839	55,925
31 HOWARD UNIVERSITY	263I	252I	716I	686I	979I	938
32 UNIVERSITY OF NEW MEXICO	261	233	622	658	883	891
33 MICHIGAN STATE UNIVERSITY	259	251	1,436	1,418	1,695	1,669
34 UNIV OF ILL MED CTR CHGO	254	305	411	642	665	947
35 MED UNIV OF SO CAROLINA	246	222	524	505	770	727
36 UNIVERSITY OF CHICAGO	243	236	1,072	1,085	1,315	1,321
37 UNIV OF SOUTH CAROLINA	238	227	763	731	1,001	958
38 UNIVERSITY OF ARIZONA	231	194	1,296	1,145	1,527	1,339
39 CITY COLLEGES OF CHICAGO	228	224	433	432	661	656
40 UNIV OF CAL SAN FRANCISCO	225	227	674	711	899	938
TOTAL, 1ST 40 INSTS.	14,489	13,922	52,745	52,387	67,234	66,309
41 UNIV OF PENNSYLVANIA	224	211	1,267	1,027	1,491	1,238
42 U TEX HLTH SCI CTR HOUSTN	223I	221	629I	618	852I	839
43 U TEX HLTH SCI CTR S ANTO	220	182I	584	627I	804	809I
44 UNIV OF CAL LOS ANGELES	215	181	1,229	1,208	1,444	1,389
45 CASE WESTERN RESERVE UNIV	209	217	1,061	1,055	1,270	1,272
46 UNIV OF MD BALT PROF SCH	205	211	435	511	640	722
47 PENNSYLVANIA STATE UNIV	203	213	1,845	1,795	2,048	2,008
48 TEMPLE UNIVERSITY	203	193	896	897	1,099	1,090
49 GEORGETOWN UNIVERSITY	202	201	615	593	817	794
50 SUNY DOWNSTATE MED CTR	200I	196	488I	482	688I	678
TOTAL, 1ST 50 INSTS.	16,593	15,948	61,794	61,200	78,387	77,148

SEE FOOTNOTES AT END OF TABLE.

TABLE B-52. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY SEX: JANUARY 1980 AND JANUARY 1981
- CONTINUED

INSTITUTIONAL RANKING	WOMEN		MEN		TOTAL	
	1981	1980	1981	1980	1981	1980
51 YESHIVA UNIVERSITY	197I	193I	669I	654I	866	847
52 UNIV OF SOUTHERN CAL	196	196	1,078	1,078	1,274	1,274
53 WEST VIRGINIA UNIVERSITY	196	204	812	880	1,008	1,084
54 UNIV OF P R-RIO PIEDRAS	195I	192I	253I	249I	448I	441I
55 UNIV OF MD COLLEGE PARK	189	162	984	924	1,173	1,086
56 UNIV OF HAWAII-MANOA	187	194	826	799	1,013	993
57 UNIVERSITY OF COLORADO	185	203	1,197	1,210	1,382	1,413
58 SUNY AT STONY BROOK	184	134	779	761	963	895
59 PURDUE UNIVERSITY	180	174	1,562	1,552	1,742	1,726
60 IOWA ST U OF SCI & TECH	180	176	1,302	1,303	1,482	1,479
TOTAL, 1ST 60 INSTS.	18,482	17,776	71,256	70,610	89,738	88,386
61 NORTHWESTERN UNIVERSITY	177	140	914	704	1,091	844
62 UNIVERSITY OF ROCHESTER	177	146	952	921	1,129	1,067
63 UNIV OF NC AT CHAPEL HILL	176	173	1,020	1,013	1,196	1,186
64 UNIV OF CAL BERKELEY	176	175	1,057	1,062	1,233	1,237
65 UNIVERSITY OF KANSAS	175I	173I	1,087I	1,070I	1,262I	1,243I
66 NEW MEXICO STATE UNIV	170	107	890	683	1,060	790
67 UNIV OF MISSOURI COLUMBIA	168	141	990	959	1,158	1,100
68 UNIV ALABAMA BIRMINGHAM	166	146	921	884	1,087	1,030
69 U TENNESSEE KNOXVILLE	164	152	719	718	883	870
70 U OF ARKANSAS MED SCI CAM	163	134	499	545	662	679
TOTAL, 1ST 70 INSTS.	20,194	19,263	80,305	79,169	100,499	98,432
71 UNIV OREGON HLTH SCI CTR	152	167	359	391	511	558
72 UNIV TENN CTR HEALTH SCI	148	174	428	432	576	606
73 COL OF MED & DENT OF N J	148	148	606	606	754	754
74 GEORGE WASHINGTON UNIV	146	146	483	480	629	626
75 MEDICAL COL OF GEORGIA	142	111	350	334	492	445
76 UNIV OF OKLA HLTH SCI CTR	142	179	563	423	705	602
77 KANS ST U - AG & APP SCI	139	105	844	814	983	919
78 UNIVERSITY OF MIAMI	139	145I	920	902I	1,059	1,047
79 UNIV OF P R-MED SCI CMPUS	138I	137I	260I	255I	398I	392I
80 NEW YORK MEDICAL COLLEGE	135	107I	482	379I	617	486I
TOTAL, 1ST 80 INSTS.	21,623	20,682	85,600	84,185	107,223	104,867
81 ARIZONA STATE UNIVERSITY	135	45I	556	632I	691	677
82 EMORY UNIVERSITY	133I	129I	673I	643I	806I	772I
83 UNIVERSITY OF CINCINNATI	133	132	863	827	996	959
84 CLEMSON UNIVERSITY	132	74I	750	767I	882	841
85 UNIVERSITY OF VIRGINIA	132	110	735	796	867	906
86 UNIVERSITY OF MISSISSIPPI	131	87	458	432	589	519
87 BAYLOR COL OF MEDICINE	129	130	604	608	733	738
88 UNIV OF CAL DAVIS	126	126	1,087	1,033	1,213	1,159
89 N C STATE UNIV AT RALEIGH	123	141	1,465	1,436	1,588	1,577
90 SUNY AT BUFFALO	122I	121E	770I	757E	892I	878E
TOTAL, 1ST 90 INSTS.	22,919	21,777	93,561	92,116	116,480	113,893
91 STANFORD UNIVERSITY	118	118	984	984	1,102	1,102
92 OREGON STATE UNIVERSITY	117	109E	954	929E	1,071	1,038
93 COLORADO STATE UNIVERSITY	116	115	912	925	1,028	1,040
94 TEXAS A & M UNIVERSITY	114	110	2,102	2,058	2,216	2,168
95 INTER AM U P R-CENTRAL	114	85	124	130	238	215
96 UNIV OF SOUTH FLORIDA	112	89I	495	463I	607	552I
97 SOUTHERN ILL U-CARBONDALE	111	88	650	598	761	686
98 UNIF SERV UNIV OF HLTH SC	110	47	130	84	240	131
99 U OF HOUSTON CENTRAL CAM	110	38	393	391	503	429
100 KENT STATE UNIVERSITY	109	56	318	311	427	367
TOTAL, 1ST 100 INSTS.	24,050	22,632	100,623	98,989	124,673	121,621
TOTAL, ALL OTHER INSTS.	22,289	21,532	111,887	111,708	134,176	133,240

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-53. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX: JANUARY 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	180771	32083	19755	605	18460	1662	6824	540	20125	3310	74133	17323	11905	3075	29569	5568
1 UNIV OF WIS-MADISON	3143	759	294	24	279	39	202	35	193	18	1670	483	161	56	344	104
2 UNIVERSITY OF MINNESOTA	3081	506	196	3	164	7	62	6	148	10	1849	348	128	33	534	99
3 UNIVERSITY OF MICHIGAN	2621	620	388	34	241	26	69	6	116	7	1323	390	164	63	320	94
4 LOUISIANA STATE UNIV	2498	590	145	7	129	4	143	31	124	28	1793	490	33	7	131	23
5 UNIV OF ILL URBANA	2246	381	387	15	287	29	122	26	183	28	728	136	150	52	389	95
6 TEXAS A & M UNIVERSITY	2216	114	397	8	100	3	72	4	127	10	1069	31	43	7	408	51
7 UNIVERSITY OF FLORIDA	2082	371	225	7	87	1	8	0	69	6	1545	328	44	10	104	19
8 OHIO STATE UNIVERSITY	2050	370	254	11	115	5	42	5	188	15	1138	277	48	9	265	48
9 PENNSYLVANIA STATE UNIV	2048	203	602	17	193	9	80	3	185	32	720	105	76	17	192	20
10 UNIVERSITY OF WASHINGTON	1966	404	261	8	130	7	156	16	77	3	1112	318	49	15	181	37
TOTAL, 1ST 10 INSTS.	23951	4318	3149	134	1725	130	956	132	1410	157	12947	2906	896	269	2868	590
11 UNIVERSITY OF KENTUCKY	1926	389	179	5	103	11	69	9	152	37	1151	290	59	13	213	24
12 PURDUE UNIVERSITY	1742	180	448	10	219	16	26	1	174	17	588	102	88	20	199	14
13 UNIVERSITY OF UTAH	1733	444	147	9	138	12	54	5	82	7	1151	367	40	5	121	39
14 UNIVERSITY OF PITTSBURGH	1703	484	153	5	155	12	17	0	123	17	1043	391	65	30	147	29
15 UNIV OF TEXAS AT AUSTIN	1699	345	250	24	405	39	188	46	179	27	229	76	118	31	330	102
16 MICHIGAN STATE UNIVERSITY	1695	259	121	0	191	12	35	2	141	16	808	154	115	32	284	43
17 UNIVERSITY OF IOWA	1588	311	68	0	92	1	12	0	74	7	1151	274	36	6	155	23
18 N C STATE UNIV AT RALEIGH	1588	123	275	8	92	10	30	0	130	16	872	59	20	5	169	25
19 RUTGERS THE ST UNIV OF NJ	1527	329	110	2	176	28	52	6	230	42	403	71	107	34	449	146
20 UNIVERSITY OF ARIZONA	1527	231	177	1	226	8	111	6	97	11	630	148	88	20	198	37
TOTAL, 1ST 20 INSTS.	40679	7413	5077	198	3522	279	1550	207	2792	354	20973	4838	1632	465	5133	1072
21 IOWA ST U OF SCI & TECH	1482	180	329	17	64	4	17	0	141	17	752	100	51	21	128	21
22 UNIV OF CAL LOS ANGELES	1444	215	149	2	142	9	44	2	75	6	779	151	71	16	184	29
23 UNIVERSITY OF COLORADO	1382	185	137	1	193	16	76	5	74	8	645	117	66	11	191	27
24 UNIVERSITY OF CONNECTICUT	1293	330	121	8	66	4	33	3	74	9	678	197	112	37	209	72
25 UNIVERSITY OF KANSAS	1262	175	147	1	110	6	49	5	93	7	622	108	60	13	181	35
26 INDIANA UNIVERSITY	1249	267	44	5	144	13	41	0	90	12	691	191	80	12	159	34
27 UNIV OF CAL BERKELEY	1233	176	284	6	183	14	28	2	82	3	409	92	38	12	209	47
28 UNIV OF CAL DAVIS	1213	126	106	0	61	1	13	0	29	2	842	92	20	3	142	28
29 UNIV OF NC AT CHAPEL HILL	1196	176	38	1	73	2	21	1	44	1	830	135	36	7	154	29
30 UNIV OF MD COLLEGE PARK	1173	189	175	4	313	39	23	2	140	20	287	72	44	9	191	43
TOTAL, 1ST 30 INSTS.	53606	9432	6607	243	4871	387	1895	227	3634	439	27508	6093	2210	606	6881	1437
31 UNIV OF MISSOURI COLUMBIA	1158	168	106	5	51	2	26	1	52	5	799	141	42	6	82	8
32 VA POLYTECH INST & ST U	1111	77	328	8	76	3	43	3	113	20	404	27	27	4	120	12
33 TEMPLE UNIVERSITY	1099	203	26	2	46	2	17	2	97	11	656	119	98	24	159	43
34 GEORGIA INSTITUTE OF TECH	1097	63	691	27	178	6	43	7	108	15	27	1	14	1	36	6
35 UNIV ALABAMA BIRMINGHAM	1087	166	25	1	23	0	4	0	27	4	953	150	26	7	29	4
36 UNIVERSITY OF GEORGIA	1084	78	27	1	76	1	57	3	70	7	622	40	85	11	147	15
37 OREGON STATE UNIVERSITY	1071	117	123	0	89	13	134	1	74	8	561	83	12	3	78	9
38 NEW MEXICO STATE UNIV	1060	170	170	4	97	8	20	1	157	32	349	57	106	28	161	40
39 WAYNE STATE UNIVERSITY	1056	303	76	22	75	24	8	3	53	10	722	212	36	7	86	25
40 WASHINGTON STATE UNIV	1045	67	122	1	90	3	40	1	76	0	516	32	50	11	151	19
TOTAL, 1ST 40 INSTS.	64474	10844	8301	314	5672	449	2287	249	4461	551	33117	6955	2706	708	7930	1618
41 COLORADO STATE UNIVERSITY	1028	116	170	7	61	2	65	3	80	4	480	72	42	13	130	15
42 UNIV OF HAWAII-MANOA	1013	187	59	0	83	5	87	9	44	0	486	140	30	4	224	29
43 WEST VIRGINIA UNIVERSITY	1008	196	103	3	35	2	16	1	49	12	333	55	21	2	451	121
44 UNIV OF SOUTH CAROLINA	1001	238	70	1	91	13	32	3	145	20	374	159	79	16	210	26
45 VIRGINIA COMMONWLTH UNIV	1000	265	0	0	24	3	0	0	57	6	755	214	30	8	134	34
46 UNIVERSITY OF CINCINNATI	996	133	123	4	65	0	15	1	56	7	619	107	39	5	79	9
47 KANS ST U - AG & APP SCI	983	139	129	1	49	0	11	0	54	6	577	95	16	1	151	36
48 SUNY AT STONY BROOK	963	184	13	0	189	16	48	1	84	9	433	126	52	10	104	22
49 UNIV OF CAL SAN DIEGO	924	88	46	0	119	9	189	11	31	1	439	51	21	2	79	14
50 AUBURN UNIVERSITY	919	96	178	5	68	5	9	1	89	17	407	39	30	7	138	22
TOTAL, 1ST 50 INSTS.	74309	12486	9228	335	6456	504	2759	279	5150	633	38020	8013	3066	776	9630	1946
TOTAL, ALL OTHER INSTS.	106462	19597	10527	270	12004	1158	4065	261	14975	2677	36113	9310	8839	2299	19939	3622

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-54. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX: JANUARY 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	49209	13705	5784	283	4050	888	1128	220	8765	2530	16509	5031	3961	1642	9012	2611
1 OHIO STATE UNIVERSITY	1684	610	80	8	47	9	13	1	95	17	1001	386	28	10	420	179
2 UNIV OF CAL LOS ANGELES	1059	254	217	20	245	57	37	7	43	16	363	97	47	22	107	35
3 CMTY COL ALLEGHENY COUNTY	934	277	97	1	148	39	0	0	256	77	164	60	140	61	129	39
4 UNIV OF CAL BERKELEY	853	216	197	15	245	62	2	0	112	43	140	40	21	10	136	46
5 UNIVERSITY OF MICHIGAN	695	230	97	14	28	10	10	3	8	4	442	126	49	35	61	38
6 UNIV OF WIS-MADISON	664	275	65	9	32	9	37	11	27	8	376	177	33	20	94	41
7 WAYNE STATE UNIVERSITY	632	206	44	10	29	7	1	0	51	10	318	115	42	13	147	51
8 UNIVERSITY OF MINNESOTA	574	147	51	3	12	4	1	1	14	7	414	111	17	13	65	28
9 LOUISIANA STATE UNIV	555	141	17	1	5	2	18	10	30	12	463	109	12	5	10	2
10 UNIVERSITY OF WASHINGTON	555	164	37	4	36	2	32	6	4	1	380	135	15	5	51	11
TOTAL, 1ST 10 INSTS.	8205	2540	902	85	827	201	151	39	640	195	4061	1356	404	194	1220	470
11 UNIV OF CAL SAN FRANCISCO	420	94	0	0	5	2	0	0	0	0	409	90	0	0	6	2
12 UNIV OF MD BALT PROF SCH	374	64	0	0	0	0	0	0	1	0	363	59	0	0	10	5
13 UNIV OF CAL DAVIS	372	93	76	6	40	10	5	1	2	1	202	58	6	3	41	14
14 INDIANA UNIVERSITY	371	116	47	2	18	2	4	0	7	2	251	98	6	1	38	11
15 TEMPLE UNIVERSITY	365	81	42	1	3	1	1	1	40	7	148	27	37	14	94	30
16 WASHINGTON STATE UNIV	353	88	36	1	23	6	8	2	23	8	196	46	18	8	49	17
17 CUYAHOGA CMTY COL DIST	336	86	49	0	31	6	1	0	109	30	30	11	41	18	75	21
18 INTER AM U P R-CENTRAL	336	100	4	0	26	4	5	0	58	14	75	30	35	11	133	41
19 UNIVERSITY OF NEW MEXICO	332	87	76	3	23	5	15	1	21	3	149	61	13	4	35	10
20 SAN DIEGO EVENING COLLEGE	328	89	43	0	27	6	5	1	83	26	51	17	43	19	76	20
TOTAL, 1ST 20 INSTS.	11792	3438	1275	98	1023	243	195	45	984	286	5935	1853	603	272	1777	641
21 UNIVERSITY OF IOWA	326	124	6	0	0	0	2	1	5	2	271	104	5	2	37	15
22 SAN JOSE STATE UNIVERSITY	319	70	108	6	37	11	21	3	43	13	19	5	15	6	76	26
23 UNIV OF ILL URBANA	317	115	36	6	24	7	42	15	13	6	112	37	25	13	65	31
24 SUNY AT BUFFALO	315	45	20	3	7	0	0	0	0	0	278	38	3	2	7	2
25 SINCLAIR COMMUNITY COL	315	61	65	2	23	2	4	1	105	14	43	29	34	10	41	3
26 WEST VALLEY COLLEGE	301	90	54	1	21	5	4	0	34	12	76	32	51	23	61	17
27 PURDUE UNIVERSITY	292	58	90	2	20	5	1	1	60	15	65	29	17	4	39	2
28 UNIVERSITY OF KENTUCKY	289	72	43	3	21	5	4	0	56	18	126	36	11	5	28	5
29 UNIVERSITY OF PITTSBURGH	285	53	19	0	15	2	3	0	25	5	191	31	3	1	29	14
30 UNIVERSITY OF CONNECTICUT	280	109	21	2	3	0	4	0	15	2	153	59	35	17	49	29
TOTAL, 1ST 30 INSTS.	14831	4235	1737	123	1194	280	280	66	1340	373	7269	2253	802	355	2209	785
31 SAN FRANCISCO STATE UNIV	280	93	36	10	27	6	8	1	32	12	35	15	30	15	112	34
32 UNIVERSITY OF KANSAS	274	67	29	1	19	4	6	1	16	6	152	36	14	6	38	13
33 UNIV OF HAWAII-MANOA	274	74	9	0	3	2	3	0	4	1	180	43	8	4	67	24
34 UNIV OF ILL MED CTR CHGO	270	64	0	0	0	0	0	0	0	0	270	64	0	0	0	0
35 U TEX HLTH SCI CTR DALLAS	266	16	0	0	0	0	0	0	3	0	256	15	7	1	0	0
36 UNIV OREGON HLTH SCI CTR	259	88	0	0	0	0	0	0	0	0	255	88	4	0	0	0
37 CALIF ST UNIV LONG BEACH	254	55	90	4	32	8	5	1	35	12	13	5	23	7	56	18
38 MONTGOMERY COLLEGE	253	64	16	0	27	5	1	0	51	15	20	8	30	13	108	23
39 UNIVERSITY OF CINCINNATI	246	68	122	11	1	1	0	0	10	4	98	45	8	4	7	3
40 UNIVERSITY OF UTAH	232	54	44	1	20	1	8	2	13	3	105	37	9	2	33	8
TOTAL, 1ST 40 INSTS.	17439	4878	2083	150	1323	307	311	71	1504	426	8653	2609	935	407	2630	908
41 COL OF MED & DENT OF N J	231	24	1	0	0	0	0	0	0	0	216	20	14	4	0	0
42 UNIV OF MD COLLEGE PARK	224	72	43	2	43	11	0	0	29	13	32	21	4	4	73	21
43 CALIF ST UNIV NORTHRIDGE	219	60	63	6	35	7	9	1	34	14	21	4	30	16	27	12
44 U TEX HLTH SCI CTR HOUSTN	217	36	0	0	1	0	0	0	1	0	210	32	1	1	4	3
45 UNIV OF TEXAS AT AUSTIN	213	64	41	4	44	8	9	3	14	4	46	23	27	13	32	9
46 HILLSBOROUGH CMTY COLLEGE	210	67	6	0	11	3	0	0	38	18	38	23	29	14	88	9
47 SAN DIEGO CITY COLLEGE	209	66	23	8	17	2	7	1	56	5	44	29	30	15	32	6
48 UNIVERSITY OF LOUISVILLE	204	32	13	1	8	2	0	0	33	12	103	7	8	1	39	9
49 VIRGINIA COMMONWLTH UNIV	202	65	0	0	19	9	0	0	32	10	61	22	6	2	84	22
50 SOUTHERN ILL U-CARBONDALE	196	31	5	0	6	3	2	0	2	1	144	13	21	10	16	4
TOTAL, 1ST 50 INSTS.	19564	5395	2278	171	1507	352	338	76	1743	503	9568	2803	1105	487	3025	1003
TOTAL, ALL OTHER INSTS.	29645	7810	3506	112	2543	536	790	144	7022	2027	6941	2228	2856	1155	5987	1608

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-55. — FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX: JANUARY 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	78078	14256	7237	197	9713	951	1727	202	6966	1113	35926	8232	4915	1317	11594	2244
1 HARVARD UNIVERSITY	3861	694	44	1	184	10	42	4	58	5	3327	640	54	16	152	18
2 JOHNS HOPKINS UNIVERSITY	3157	440	922	10	365	18	21	3	197	48	1496	323	31	4	125	34
3 CORNELL UNIVERSITY	2331	385	289	12	218	12	28	3	74	9	1348	249	105	42	269	58
4 MASS INST OF TECHNOLOGY	2119	343	683	58	494	41	113	14	169	13	386	159	51	22	223	36
5 YALE UNIVERSITY	1794	412	55	3	143	6	26	1	54	5	1320	357	39	14	157	26
6 COLUMBIA UNIV MAIN DIV	1744	408	112	5	128	12	192	48	39	2	1001	271	15	4	257	66
7 DUKE UNIVERSITY	1563	299	49	0	72	7	22	5	36	3	1231	256	23	4	130	24
8 UNIV OF PENNSYLVANIA	1491	224	94	2	84	3	5	0	82	8	950	164	26	4	250	43
9 WASHINGTON UNIVERSITY	1480	303	70	0	58	5	17	2	62	11	1185	270	26	6	62	9
10 NEW YORK UNIVERSITY	1425	309	27	0	75	6	0	0	118	14	952	225	74	24	179	40
TOTAL, 1ST 10 INSTS.	20965	3817	2345	91	1821	120	466	80	889	118	13196	2914	444	140	1804	354
11 UNIVERSITY OF CHICAGO	1315	243	46	1	193	14	43	4	59	3	794	197	40	9	140	15
12 UNIV OF SOUTHERN CAL	1274	196	128	2	85	7	14	0	39	1	877	165	38	6	93	15
13 CASE WESTERN RESERVE UNIV	1270	209	115	2	79	4	7	0	34	3	983	186	14	3	38	11
14 CUNY MT SINAI SCH OF MED	1192	288	27	0	27	2	4	1	19	2	1091	278	4	1	20	4
15 UNIVERSITY OF ROCHESTER	1129	177	42	2	198	3	7	0	54	3	660	143	82	20	86	6
16 STANFORD UNIVERSITY	1102	118	294	10	153	8	41	5	92	3	395	69	28	8	99	15
17 NORTHWESTERN UNIVERSITY	1091	177	156	6	124	5	14	2	112	8	478	114	68	19	139	23
18 UNIVERSITY OF MIAMI	1059	139	62	1	41	0	94	2	33	4	733	122	39	6	57	4
19 HOWARD UNIVERSITY	979	263	44	0	142	34	48	20	25	2	645	186	17	2	58	19
20 BOSTON UNIVERSITY	890	276	27	2	80	6	6	0	41	5	571	211	36	14	129	38
TOTAL, 1ST 20 INSTS.	32266	5903	3286	117	2943	203	744	114	1397	152	20423	4585	810	228	2663	504
21 YESHIVA UNIVERSITY	866	197	5	0	60	12	0	0	8	1	690	151	49	19	54	14
22 GEORGETOWN UNIVERSITY	817	202	0	0	31	2	0	0	12	0	679	182	12	2	83	16
23 EMORY UNIVERSITY	806	133	90	5	81	4	15	1	47	3	447	95	35	11	91	14
24 VANDERBILT UNIVERSITY	747	97	36	2	57	1	4	0	47	4	509	80	39	5	55	5
25 BAYLOR COL OF MEDICINE	733	129	0	0	0	0	0	0	0	0	733	129	0	0	0	0
26 GEORGE WASHINGTON UNIV	629	146	74	1	34	2	8	0	68	7	329	102	25	9	91	25
27 NEW YORK MEDICAL COLLEGE	617	135	0	0	0	0	0	0	0	0	617	135	0	0	0	0
28 BRIGHAM YOUNG UNIVERSITY	585	67	84	0	56	0	21	1	126	12	146	39	52	7	100	8
29 CALIFORNIA INST OF TECH	556	52	142	2	236	21	68	13	29	1	63	14	0	0	18	1
30 CARNEGIE-MELLON UNIV	546	84	175	10	145	21	0	0	86	7	79	32	32	10	29	4
TOTAL, 1ST 30 INSTS.	39168	7145	3892	137	3643	266	860	129	1820	187	24715	5544	1054	291	3184	591
31 TULANE UNIVERSITY	541	77	40	0	33	1	8	2	35	4	324	51	24	6	77	13
32 PRINCETON UNIVERSITY	529	81	96	2	137	11	42	8	55	3	69	25	26	8	104	24
33 ST LOUIS UNIVERSITY	514	98	22	0	24	1	13	0	17	6	366	69	19	4	53	18
34 LOMA LINDA UNIVERSITY	482	104	54	0	49	12	10	0	28	7	268	77	20	3	53	5
35 WAKE FOREST UNIVERSITY	462	45	2	0	21	0	0	0	17	1	366	31	23	8	33	5
36 SYRACUSE UNIVERSITY	437	82	80	2	49	1	7	0	59	6	71	40	64	18	107	15
37 ROCKEFELLER UNIVERSITY	401	74	0	0	39	2	0	0	14	0	314	67	34	5	0	0
38 UNIVERSITY OF DAYTON	383	27	128	1	108	7	6	2	69	5	20	5	23	3	29	4
39 BROWN UNIVERSITY	370	49	50	2	71	7	24	4	53	3	84	19	15	2	73	12
40 RENSSELAER POLYTECH INST	368	16	201	3	74	4	7	0	48	4	15	3	9	1	14	1
TOTAL, 1ST 40 INSTS.	43655	7798	4565	147	4248	312	977	145	2215	226	26612	5931	1311	349	3727	688
41 NORTHEASTERN UNIVERSITY	350	46	116	3	60	6	8	0	52	11	22	6	23	7	69	13
42 UNIVERSITY OF NOTRE DAME	347	19	81	0	104	4	6	0	34	2	41	5	19	3	62	5
43 TUFTS UNIVERSITY	347	71	37	1	32	2	3	0	28	2	183	49	19	6	45	11
44 LOYOLA UNIV - CHICAGO	334	52	0	0	25	1	0	0	18	2	204	33	35	4	52	12
45 DARTMOUTH COLLEGE	314	40	26	1	33	2	8	1	23	1	160	25	20	4	44	6
46 HAHNEMANN MED COL & HOSP	308	39	2	0	9	0	0	0	1	0	272	31	21	7	3	1
47 LONG ISLAND UNIVERSITY	303	54	0	0	48	2	16	4	44	8	88	14	34	10	73	16
48 UNIVERSITY OF DENVER	295	67	35	2	59	2	8	3	58	15	35	18	35	10	65	17
49 MARQUETTE UNIVERSITY	295	71	46	1	28	1	0	0	23	3	148	58	11	3	39	5
50 FAIRLEIGH DICKINSON UNIV	292	56	25	1	39	3	3	0	29	6	95	20	42	15	59	11
TOTAL, 1ST 50 INSTS.	46840	8313	4933	156	4685	335	1029	153	2525	276	27860	6190	1570	418	4238	785
TOTAL, ALL OTHER INSTS.	31238	5943	2304	41	5028	616	698	49	4441	837	8066	2042	3345	899	7356	1459

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-56. — PART-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX: JANUARY 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	25350	5859	2013	60	1836	462	347	93	3044	783	10670	2288	2560	967	4880	1206
1 HARVARD UNIVERSITY	1961	301	6	0	38	3	0	0	6	1	1870	290	9	4	32	3
2 NEW YORK UNIVERSITY	711	143	6	0	10	3	3	2	39	10	454	56	90	42	109	30
3 HOWARD UNIVERSITY	633	184	40	1	107	34	49	23	4	0	382	116	5	0	46	10
4 CHAPMAN COLLEGE	580	170	0	0	32	4	0	0	50	15	70	29	120	44	308	78
5 GEORGE WASHINGTON UNIV	555	102	110	0	28	5	11	0	62	7	215	43	48	26	81	21
6 FAIRLEIGH DICKINSON UNIV	454	70	51	2	34	7	2	0	52	15	236	24	28	9	51	13
7 COLUMBIA UNIV MAIN DIV	444	104	28	0	12	3	7	3	10	1	286	68	4	2	97	26
8 BOSTON UNIVERSITY	382	127	30	0	2	0	0	0	125	16	123	54	3	1	99	56
9 PHILA COL OSTEOPATHIC MED	375	4	0	0	0	0	0	0	0	0	375	4	0	0	0	0
10 UNIV OF PENNSYLVANIA	348	78	34	4	17	2	1	1	11	0	259	65	10	4	16	2
TOTAL, 1ST 10 INSTS.	6443	1283	305	7	280	61	73	29	359	65	4270	749	317	133	839	239
11 TUFTS UNIVERSITY	344	64	23	5	0	0	0	0	2	2	303	49	3	2	13	6
12 UNIV OF SOUTHERN CAL	332	74	20	0	10	1	0	0	5	0	251	60	11	0	35	13
13 DARTMOUTH COLLEGE	303	49	10	0	17	1	6	0	10	0	222	39	21	7	17	2
14 YALE UNIVERSITY	299	117	8	0	12	5	2	0	6	1	223	91	20	12	28	8
15 LOYOLA UNIV - CHICAGO	282	51	0	0	8	2	0	0	22	2	196	34	24	5	32	8
16 CUNY MT SINAI SCH OF MED	262	39	3	0	1	0	0	0	0	0	258	39	0	0	0	0
17 STANFORD UNIVERSITY	262	37	95	5	29	4	16	1	25	3	63	12	13	8	21	4
18 NORTHWESTERN UNIVERSITY	257	48	35	0	5	2	3	2	4	1	172	35	8	2	30	6
19 YESHIVA UNIVERSITY	256	51	0	0	1	0	0	0	4	1	188	28	39	15	24	7
20 NEW YORK MEDICAL COLLEGE	256	54	0	0	0	0	0	0	0	0	256	54	0	0	0	0
TOTAL, 1ST 20 INSTS.	9296	1867	499	17	363	76	100	32	437	75	6402	1190	456	184	1039	293
21 CASE WESTERN RESERVE UNIV	233	43	0	0	0	0	0	0	0	0	214	35	11	3	8	5
22 LOMA LINDA UNIVERSITY	230	38	22	0	11	1	3	0	13	2	135	23	15	6	31	6
23 MERCY COLLEGE	226	89	0	0	3	0	2	0	64	27	23	15	62	36	72	11
24 NEW YORK INST TECHNOLOGY	218	36	45	1	30	3	0	0	58	18	55	9	6	1	24	4
25 MARQUETTE UNIVERSITY	217	32	3	0	0	0	0	0	10	3	193	26	3	1	8	2
26 FLORIDA INST OF TECH	216	13	15	0	10	1	3	0	32	8	7	0	19	3	130	1
27 MASS INST OF TECHNOLOGY	200	55	70	7	26	8	17	9	8	1	39	20	12	5	28	5
28 LONG ISLAND UNIVERSITY	200	29	0	0	12	1	6	4	24	1	49	6	11	3	98	14
29 INTER AM U P R-SAN GERMAN	189	63	0	0	29	12	0	0	24	7	45	19	36	13	55	12
30 PACE UNIVERSITY	189	60	0	0	21	5	2	1	64	20	15	5	56	22	31	7
TOTAL, 1ST 30 INSTS.	11414	2325	654	25	505	107	133	46	734	162	7177	1348	687	277	1524	360
31 ST JOHN'S UNIVERSITY (NY)	180	36	0	0	4	1	0	0	15	1	25	5	39	9	97	20
32 AMERICAN UNIVERSITY	180	34	0	0	14	1	0	0	45	6	10	6	11	3	100	18
33 LAWRENCE INST OF TECH	176	58	3	0	15	5	4	1	28	9	28	11	35	14	63	18
34 UNIVERSITY OF DETROIT	174	19	13	1	1	0	0	0	6	3	140	14	4	1	10	0
35 JOHNS HOPKINS UNIVERSITY	166	33	12	1	3	1	1	0	3	0	60	16	0	0	87	15
36 ILLINOIS INST OF TECH	164	7	80	1	10	0	0	0	51	4	7	1	8	1	8	0
37 WILLIAM RAINEY HARPER COL	157	53	20	0	11	1	0	0	52	12	40	39	8	0	26	1
38 CORNELL UNIVERSITY	155	51	7	0	8	7	2	1	11	3	91	21	11	8	25	11
39 JOHN F KENNEDY UNIVERSITY	154	58	0	0	5	4	1	0	1	0	13	4	77	38	57	12
40 EMORY UNIVERSITY	142	21	13	0	7	1	1	0	9	1	83	13	10	3	19	3
TOTAL, 1ST 40 INSTS.	13062	2695	802	28	583	128	142	48	955	201	7674	1478	890	354	2016	458
41 WASHINGTON UNIVERSITY	138	40	21	0	5	3	3	1	9	0	86	29	6	3	8	4
42 VANDERBILT UNIVERSITY	138	6	1	0	4	1	3	1	0	0	121	2	1	0	8	2
43 UNIV OF HEALTH SCIENCES	132	4	0	0	0	0	0	0	0	0	130	4	2	0	0	0
44 UNIVERSITY OF NEW HAVEN	130	25	28	1	21	5	0	0	30	6	8	3	8	3	35	7
45 ST LOUIS UNIVERSITY	122	32	1	0	0	0	2	0	3	1	73	8	6	3	37	20
46 ROOSEVELT UNIVERSITY	117	34	0	0	12	2	4	1	27	5	2	2	19	8	53	16
47 UNIVERSITY OF BRIDGEPORT	117	49	19	0	11	3	0	0	11	3	66	40	3	2	7	1
48 CATHOLIC UNIV OF AMERICA	112	12	25	0	23	2	0	0	13	0	14	7	0	0	37	3
49 POLYTECHNIC INST OF N Y	110	8	84	2	5	0	0	0	12	2	0	0	0	0	9	4
50 HOFSTRA UNIVERSITY	109	29	8	0	12	3	6	1	29	7	4	1	23	8	27	9
TOTAL, 1ST 50 INSTS.	14287	2934	989	31	676	147	160	52	1089	225	8178	1574	958	381	2237	524
TOTAL, ALL OTHER INSTS.	11063	2925	1024	29	1160	315	187	41	1955	558	2492	714	1602	586	2643	682

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-57. -- SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY FIELD: JANUARY 1981

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHO-LOGY	SOCIAL SCIENCES
TOTAL, ALL INSTITUTIONS	15,296	6,609	5,512	853	1,444	754	9	115
1 LOS ALAMOS NATIONAL LAB (UNIV OF CALIFORNIA)	2,839	932	1,438	102	236	129	C	2
2 JET PROPULSION LABORATORY (CALIFORNIA INST OF TECH)	2,739	1,984E	438E	34E	255E	28E	0	0
3 LAWRENCE LIVERMORE LAB (UNIV OF CALIFORNIA)	2,632	1,056	1,012	113	376	69	0	6
4 ARGONNE NATIONAL LAB (UNIV OF CHICAGO)	1,979	77E	743	171	89	184	0	14
5 BROOKHAVEN NATIONAL LAB (AUI) 1/	1,209	360	469	49	115	199	0	17
6 LINCOLN LABORATORY (MASS INST OF TECHNOLOGY)	1,057	745	208	0	103	0	1	0
7 LAWRENCE BERKELEY LAB (UNIV OF CALIFORNIA)	949	172	403	208	75	86	0	5
8 FERMI NATIONAL ACCEL LAB (URA) 2/	316	110	201	0	5	0	0	0
9 STANFORD LINEAR ACCEL CTR (STANFORD UNIVERSITY)	271	117	130	0	24	0	0	0
10 PLASMA PHYSICS LABORATORY (PRINCETON UNIV)	267I	150I	98I	0	19I	0	0	0
TOTAL, 1ST 10 INSTS.	14,258	6,404	5,140	677	1,297	695	1	44
11 NATL CTR ATMOSPHERIC RES (UCAR) 3/	242	55	0	165	22	0	0	0
12 AMES LABORATORY (IOWA STATE UNIV OF S&T)	206	30	163	1	12	0	0	0
13 CENTER FOR NAVAL ANALYSES (UNIV OF ROCHESTER)	177E	24	55	0	55	2	2	39
14 OAK RIDGE INST NUCLR STDS (ORAU) 5/	160	13	31	7	14	57	6	32
15 NATL RADIO ASTRONOMY OBS (AUI) 1/	101	43	36	0	22	0	0	0
16 KITT PEAK NATL OBSERVATORY (AURA) 4/	84	26	42	0	16	0	0	0
17 NATL ASTRON & IONOS CTR (CORNELL UNIVERSITY)	31	12	14	3	2	0	0	0
18 SACRAMENTO PEAK OBSERVTRY (AURA) 4/	24	2	19	0	3	0	0	0
19 CERRO TOLOLO INTER-AM OBS (AURA) 4/	13	0	12	0	1	0	0	0
TOTAL, 1ST 19 INSTS.	15,296	6,609	5,512	853	1,444	754	9	115

1/ ASSOCIATED UNIVERSITIES, INC.
2/ UNIVERSITIES RESEARCH ASSOCIATION
3/ UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH
4/ ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.
5/ OAK RIDGE ASSOCIATED UNIVERSITIES

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

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TABLE A1A

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
ALL UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	164542	161595	145748	143405	18794	18190
FIRST PROFESSIONAL	2220	49851	48627	34288	34321	15563	14306
MASTER'S	2230	86036	83429	56877	56697	29159	26732
BACHELOR'S OR THE EQUIVALENT	2240	32979	30415	21936	20438	11043	9977
TOTAL	2200	333408	324066	258849	254861	74559	69205

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	26992	26478	7797	7269	26190	25765	7454	6991	802	713	343	278
AERONAUTICAL & ASTRONAUTICAL	2611	1058	1144	205	263	1036	1117	196	248	22	27	9	15
CHEMICAL ENGINEERS	2612	1901	1886	384	466	1833	1827	351	445	68	59	33	21
CIVIL ENGINEERS	2613	4428	4326	1260	1204	4295	4208	1215	1167	133	118	45	37
ELECTRICAL ENGINEERS	2614	6502	6374	2055	1782	6378	6260	2007	1753	124	114	48	29
MECHANICAL ENGINEERS	2615	4931	4820	1391	1258	4820	4728	1343	1229	111	92	48	29
OTHER ENGINEERS	2616	8172	7928	2502	2296	7828	7625	2342	2149	344	303	160	147
PHYSICAL SCIENTISTS (TOTAL)	2620	28173	27994	5886	5559	25560	25507	4536	4237	2613	2487	1350	1322
ASTRONOMERS	2621	897	816	165	137	818	748	139	117	79	68	26	20
CHEMISTS	2622	14755	14328	3325	3283	12867	12553	2305	2246	1888	1775	1020	1037
PHYSICISTS	2623	11014	11326	1896	1682	10524	10834	1703	1522	490	492	193	160
OTHER PHYSICAL SCIENTISTS	2624	1507	1524	500	457	1351	1372	389	352	156	152	111	105
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	8551	8336	1475	1483	7809	7676	1162	1197	742	660	313	286
ATMOSPHERIC SCIENTISTS	2631	763	793	155	150	713	749	135	136	50	44	20	14
EARTH SCIENTISTS	2632	5632	5556	994	1017	5209	5158	806	833	423	398	188	184
OCEANOGRAPHERS	2633	1465	1386	141	153	1304	1259	97	113	161	127	44	40
OTHER ENVIRONMENTAL SCIENTISTS	2634	691	601	185	163	583	510	124	115	108	91	61	48
MATHEMATICAL SCIENTISTS (TOTAL)	2640	27091	26036	11809	9928	22668	21946	8496	7123	4423	4090	3313	2805
MATHEMATICIANS	2641	20224	19922	8312	7165	16914	16741	5551	4727	3310	3181	2761	2438
COMPUTER SCIENTISTS	2642	6867	6114	3497	2763	5754	5205	2945	2396	1113	909	552	367
LIFE SCIENTISTS (TOTAL)	2650	110059	108114	27179	25526	84504	84049	19860	19011	25555	24065	7319	6515
AGRICULTURAL SCIENTISTS	2651	14354	14432	1540	1456	13009	13107	1249	1171	1345	1325	291	285
BIOLOGICAL SCIENTISTS	2652	39866	38725	6426	6084	31186	30506	4024	3799	8680	8219	2402	2285
MEDICAL SCIENTISTS	2653	50707	50316	17827	16803	38308	38599	13972	13485	12399	11717	3855	3318
OTHER LIFE SCIENTISTS	2654	5132	4641	1386	1183	2001	1837	615	556	3131	2804	771	627
PSYCHOLOGISTS (TOTAL)	2660	16820	16751	6521	6506	12428	12429	3912	3850	4392	4322	2609	2656
SOCIAL SCIENTISTS (TOTAL)	2670	41163	41152	13892	12934	33351	33325	10075	9404	7812	7827	3817	3530
ECONOMISTS	2671	11201	11101	3833	3582	10075	9990	3300	3050	1126	1111	533	532
POLITICAL SCIENTISTS	2672	8992	8768	2568	2426	7825	7653	2034	1933	1167	1115	534	493
SOCIOLOGISTS	2673	10706	10857	3929	3643	7768	7919	2358	2224	2938	2938	1571	1419
OTHER SOCIAL SCIENTISTS	2674	10264	10426	3562	3283	7683	7763	2383	2197	2581	2663	1179	1086
TOTAL	2600	258849	254861	74559	69205	212510	210697	55495	51813	46339	44164	19064	17392

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	34789	33747	26992	26478	7797	7269	29741.	29111.	6782.	7020.	22.8	24.1
AERONAUTICAL & ASTRONAUTICAL	2711	1263	1407	1058	1144	205	263	1119.	1238.	285.	395.	25.5	31.9
CHEMICAL ENGINEERS	2712	2285	2352	1901	1886	384	466	2042.	2088.	511.	560.	25.0	26.8
CIVIL ENGINEERS	2713	5688	5530	4428	4326	1260	1204	4859.	4752.	692.	728.	14.2	15.3
ELECTRICAL ENGINEERS	2714	8557	8156	6502	6374	2055	1782	7242.	6984.	1769.	1814.	24.4	26.0
MECHANICAL ENGINEERS	2715	6322	6078	4931	4820	1391	1258	5416.	5279.	885.	945.	16.3	17.9
OTHER ENGINEERS	2716	10674	10224	8172	7928	2502	2296	9063.	8771.	2640.	2578.	29.1	29.4
PHYSICAL SCIENTISTS (TOTAL)	2720	34059	33553	28173	27994	5886	5559	30725.	30480.	7132.	7072.	23.2	23.2
ASTRONOMERS	2721	1062	953	897	816	165	137	951.	858.	369.	366.	38.8	42.6
CHEMISTS	2722	18080	17611	14755	14328	3325	3283	16257.	15889.	3430.	3030.	21.1	19.1
PHYSICISTS	2723	12910	13008	11014	11326	1896	1682	11768.	12018.	2587.	2931.	22.0	24.4
OTHER PHYSICAL SCIENTISTS	2724	2007	1981	1507	1524	500	457	1750.	1715.	746.	745.	42.7	43.4
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	10026	9819	8551	8336	1475	1483	9137.	8973.	2882.	2712.	31.5	30.2
ATMOSPHERIC SCIENTISTS	2731	918	943	763	793	155	150	812.	841.	398.	426.	48.9	50.6
EARTH SCIENTISTS	2732	6626	6573	5632	5556	994	1017	6040.	6040.	1242.	1180.	20.6	19.5
OCEANOGRAPHERS	2733	1606	1539	1465	1386	141	153	1503.	1430.	989.	845.	65.8	59.1
OTHER ENVIRONMENTAL SCIENTISTS	2734	876	764	691	601	185	163	782.	662.	253.	261.	32.4	39.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	38900	35964	27091	26036	11809	9928	32092.	30174.	2114.	2101.	6.6	7.0
MATHEMATICIANS	2741	28536	27087	20224	19922	8312	7165	23876.	23023.	1357.	1345.	5.7	5.8
COMPUTER SCIENTISTS	2742	10364	8877	6867	6114	3497	2763	8215.	7150.	757.	756.	9.2	10.6
LIFE SCIENTISTS (TOTAL)	2750	137238	133640	110059	108114	27179	25526	119713.	117135.	32857.	32019.	27.4	27.3
AGRICULTURAL SCIENTISTS	2751	15894	15888	14354	14432	1540	1456	15044.	14848.	5737.	5676.	38.1	38.2
BIOLOGICAL SCIENTISTS	2752	46292	44809	39866	38725	6426	6084	42738.	41219.	12842.	12262.	30.0	29.7
MEDICAL SCIENTISTS	2753	68534	67119	50707	50316	17827	16803	56332.	55927.	13648.	13389.	24.2	23.9
OTHER LIFE SCIENTISTS	2754	6518	5824	5132	4641	1386	1183	5598.	5141.	631.	691.	11.3	13.4
PSYCHOLOGISTS (TOTAL)	2760	23341	23257	16820	16751	6521	6506	19259.	19310.	1604.	1636.	8.3	8.5
SOCIAL SCIENTISTS (TOTAL)	2770	55055	54086	41163	41152	13892	12934	46622.	46154.	3791.	3835.	8.1	8.3
ECONOMISTS	2771	15034	14683	11201	11101	3833	3582	12674.	12486.	1316.	1382.	10.4	11.1
POLITICAL SCIENTISTS	2772	11560	11194	8992	8768	2568	2426	9990.	9748.	594.	582.	5.9	6.0
SOCIOLOGISTS	2773	14635	14500	10706	10857	3929	3643	12454.	12296.	783.	798.	6.3	6.5
OTHER SOCIAL SCIENTISTS	2774	13826	13709	10264	10426	3562	3283	11505.	11625.	1099.	1072.	9.5	9.2
TOTAL	2700	333408	324066	258849	254861	74559	69205	287289.	281336.	57162.	56395.	19.9	20.0

TABLE A1B

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PUBLIC UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	111957	110137	100663	98988	11294	11149
FIRST PROFESSIONAL	2220	25391	25084	17409	17412	7982	7672
MASTER'S	2230	66571	64523	45738	45751	20833	18772
BACHELOR'S OR THE EQUIVALENT	2240	26061	24156	16961	15906	9100	8250
TOTAL	2200	229980	223900	180771	178057	[illegible]209	45843

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	19755	19350	5784	5395	19150	18819	5501	5172	605	531	283	223
AERONAUTICAL & ASTRONAUTICAL	2611	654	659	120	152	640	645	114	146	14	14	6	6
CHEMICAL ENGINEERS	2612	1341	1339	293	358	1290	1291	265	343	51	48	28	15
CIVIL ENGINEERS	2613	3535	3464	958	944	3434	3366	922	916	101	98	36	28
ELECTRICAL ENGINEERS	2614	4167	4083	1421	1268	4092	4021	1392	1245	75	62	29	23
MECHANICAL ENGINEERS	2615	3538	3494	956	846	3447	3424	917	822	91	70	39	24
OTHER ENGINEERS	2616	6520	6311	2036	1827	6247	6072	1891	1700	273	239	145	127
PHYSICAL SCIENTISTS (TOTAL)	2620	18460	18354	4050	3893	16798	16767	3162	3011	1662	1587	888	882
ASTRONOMERS	2621	621	566	124	101	567	516	106	86	54	50	18	15
CHEMISTS	2622	9579	9470	2375	2395	8388	8351	1676	1683	1191	1119	699	712
PHYSICISTS	2623	7287	7275	1266	1130	6965	6958	1143	1022	322	317	123	108
OTHER PHYSICAL SCIENTISTS	2624	973	1043	285	267	878	942	237	220	95	101	48	47
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	6824	6647	1128	1129	6234	6171	908	923	540	476	220	206
ATMOSPHERIC SCIENTISTS	2631	666	675	139	131	624	639	119	117	42	36	20	14
EARTH SCIENTISTS	2632	4580	4511	770	777	4283	4204	632	644	337	307	138	133
OCEANOGRAPHERS	2633	1031	1017	114	128	935	941	80	92	96	76	34	36
OTHER ENVIRONMENTAL SCIENTISTS	2634	547	444	105	93	482	387	77	70	65	57	28	23
MATHEMATICAL SCIENTISTS (TOTAL)	2640	20125	19460	8765	7263	16815	16373	6235	5087	3310	3087	2530	2176
MATHEMATICIANS	2641	14974	14799	6313	5387	12526	12436	4195	3481	2448	2363	2118	1906
COMPUTER SCIENTISTS	2642	5151	4661	2452	1876	4289	3937	2040	1606	862	724	412	270
LIFE SCIENTISTS (TOTAL)	2650	74133	72761	16509	15929	56810	56521	11478	11541	17323	16240	5031	4388
AGRICULTURAL SCIENTISTS	2651	13743	13835	1481	1405	12446	12550	1197	1127	1297	1285	284	278
BIOLOGICAL SCIENTISTS	2652	26313	25824	4469	4193	20911	20707	2783	2587	5402	5117	1686	1606
MEDICAL SCIENTISTS	2653	30066	29875	9475	9523	21945	22051	7015	7433	8121	7824	2460	2090
OTHER LIFE SCIENTISTS	2654	4011	3227	1084	808	1508	1213	483	394	2503	2014	601	414
PSYCHOLOGISTS (TOTAL)	2660	11905	11876	3961	4020	8830	8825	2319	2301	3075	3051	1642	1719
SOCIAL SCIENTISTS (TOTAL)	2670	29569	29609	9012	8214	24001	23985	6401	5828	5568	5624	2611	2386
ECONOMISTS	2671	7609	7545	2269	2087	6857	6793	1917	1741	752	752	352	346
POLITICAL SCIENTISTS	2672	6117	5905	1502	1375	5330	5173	1166	1081	787	732	336	294
SOCIOLOGISTS	2673	7604	7758	2552	2327	5578	5744	1498	1380	2026	2014	1054	947
OTHER SOCIAL SCIENTISTS	2674	8239	8401	2689	2425	6236	6275	1820	1626	2003	2126	869	799
TOTAL	2600	180771	178057	49209	45843	148688	147461	36004	33863	32083	30596	13205	11980

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	25539	24745	19755	19350	5784	5395	21755.	21286.	3877.	4052.	17.8	19.0
AERONAUTICAL & ASTRONAUTICAL	2711	774	811	654	659	120	152	682.	708.	101.	141.	14.8	19.9
CHEMICAL ENGINEERS	2712	1634	1697	1341	1339	293	358	1436.	1496.	308.	375.	21.5	25.1
CIVIL ENGINEERS	2713	4493	4408	3535	3464	958	944	3870.	3796.	525.	533.	13.6	14.0
ELECTRICAL ENGINEERS	2714	5588	5351	4167	4083	1421	1268	4676.	4517.	651.	705.	13.9	15.6
MECHANICAL ENGINEERS	2715	4494	4340	3538	3494	956	846	3853.	3799.	441.	495.	11.5	13.0
OTHER ENGINEERS	2716	8556	8138	6520	6311	2036	1827	7238.	6970.	1850.	1803.	25.6	25.9
PHYSICAL SCIENTISTS (TOTAL)	2720	22510	22247	18460	18354	4050	3893	20151.	20032.	3949.	3934.	19.6	19.6
ASTRONOMERS	2721	745	667	621	566	124	101	660.	594.	218.	248.	33.0	41.7
CHEMISTS	2722	11954	11865	9579	9470	2375	2395	10626.	10583.	1829.	1734.	17.2	16.4
PHYSICISTS	2723	8553	8405	7287	7275	1266	1130	7753.	7711.	1428.	1466.	18.4	19.0
OTHER PHYSICAL SCIENTISTS	2724	1258	1310	973	1043	285	267	1112.	1144.	474.	486.	42.6	42.5
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	7952	7776	6824	6647	1128	1129	7236.	7111.	2126.	2115.	29.4	29.7
ATMOSPHERIC SCIENTISTS	2731	805	806	666	675	139	131	703.	711.	348.	365.	49.5	51.3
EARTH SCIENTISTS	2732	5350	5288	4580	4511	770	777	4878.	4867.	954.	933.	19.6	19.2
OCEANOGRAPHERS	2733	1145	1145	1031	1017	114	128	1048.	1050.	631.	639.	60.2	60.9
OTHER ENVIRONMENTAL SCIENTISTS	2734	652	537	547	444	105	93	607.	483.	192.	178.	31.6	37.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	28890	26723	20125	19460	8765	7263	23781.	22482.	1110.	1118.	4.7	5.0
MATHEMATICIANS	2741	21287	20186	14974	14799	6313	5387	17713.	17099.	655.	649.	3.7	3.8
COMPUTER SCIENTISTS	2742	7603	6537	5151	4661	2452	1876	6069.	5383.	455.	469.	7.5	8.7
LIFE SCIENTISTS (TOTAL)	2750	90642	88690	74133	72761	16509	15929	79743.	78071.	20604.	20150.	25.8	25.8
AGRICULTURAL SCIENTISTS	2751	15224	15240	13743	13835	1481	1405	14398.	14229.	5513.	5454.	38.3	38.3
BIOLOGICAL SCIENTISTS	2752	30782	30017	26313	25824	4469	4193	28233.	27519.	7599.	7262.	26.9	26.4
MEDICAL SCIENTISTS	2753	39541	39398	30066	29875	9475	9523	32748.	32771.	7152.	7051.	21.8	21.5
OTHER LIFE SCIENTISTS	2754	5095	4035	4011	3227	1084	808	4364.	3552.	341.	382.	7.8	10.8
PSYCHOLOGISTS (TOTAL)	2760	15866	15896	11905	11876	3961	4020	13360.	13466.	974.	1018.	7.3	7.6
SOCIAL SCIENTISTS (TOTAL)	2770	38581	37823	29569	29609	9012	8214	33012.	32718.	2638.	2638.	8.0	8.1
ECONOMISTS	2771	9878	9632	7609	7545	2269	2087	8432.	8344.	966.	1015.	11.5	12.2
POLITICAL SCIENTISTS	2772	7619	7280	6117	5905	1502	1375	6682.	6465.	354.	338.	5.3	5.2
SOCIOLOGISTS	2773	10156	10085	7604	7758	2552	2327	8772.	8643.	555.	543.	6.3	6.3
OTHER SOCIAL SCIENTISTS	2774	10928	10826	8239	8401	2689	2425	9127.	9266.	763.	742.	8.4	8.0
TOTAL	2700	229980	223900	180771	178057	49209	45843	199039.	195165.	35277.	35024.	17.7	17.9

TABLE A1C

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PRIVATE UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	52585	51458	45085	44417	7500	7041
FIRST PROFESSIONAL	2220	24460	23543	16879	16909	7581	6634
MASTER'S	2230	19465	18906	11139	10946	8326	7960
BACHELOR'S OR THE EQUIVALENT	2240	6918	6259	4975	4532	1943	1727
TOTAL	2200	103428	100166	78078	76804	25350	23362

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	7237	7128	2013	1874	7040	6946	1953	1819	197	182	60	55
AERONAUTICAL & ASTRONAUTICAL	2611	404	485	85	111	396	472	82	102	8	13	3	*
CHEMICAL ENGINEERS	2612	560	547	91	108	543	536	86	102	17	11	5	6
CIVIL ENGINEERS	2613	893	862	302	260	861	842	293	251	32	20	9	9
ELECTRICAL ENGINEERS	2614	2335	2291	634	514	2286	2239	615	508	49	52	19	6
MECHANICAL ENGINEERS	2615	1393	1326	435	412	1373	1304	426	407	20	22	9	5
OTHER ENGINEERS	2616	1652	1617	466	469	1581	1553	451	449	71	64	15	20
PHYSICAL SCIENTISTS (TOTAL)	2620	9713	9640	1836	1666	8762	8740	1374	1226	951	900	462	440
ASTRONOMERS	2621	276	250	41	36	251	232	33	31	25	18	8	5
CHEMISTS	2622	5176	4858	950	888	4479	4202	629	563	697	656	321	325
PHYSICISTS	2623	3727	4051	630	552	3559	3876	560	500	168	175	70	52
OTHER PHYSICAL SCIENTISTS	2624	534	481	215	190	473	430	152	132	61	51	63	58
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1727	1689	347	354	1525	1505	254	274	202	184	93	80
ATMOSPHERIC SCIENTISTS	2631	97	118	16	19	89	110	16	19	8	8	0	0
EARTH SCIENTISTS	2632	1052	1045	224	240	966	954	174	189	86	91	50	51
OCEANOGRAPHERS	2633	434	369	27	25	369	318	17	21	65	51	10	4
OTHER ENVIRONMENTAL SCIENTISTS	2634	144	157	80	70	101	123	47	45	43	34	33	25
MATHEMATICAL SCIENTISTS (TOTAL)	2640	6966	6576	3044	2665	5853	5573	2261	2036	1113	1003	783	629
MATHEMATICIANS	2641	5250	5123	1999	1778	4388	4305	1356	1246	862	818	643	532
COMPUTER SCIENTISTS	2642	1716	1453	1045	887	1465	1268	905	790	251	185	140	97
LIFE SCIENTISTS (TOTAL)	2650	35926	35353	10670	9597	27694	27528	8382	7470	8232	7825	2288	2127
AGRICULTURAL SCIENTISTS	2651	611	597	59	51	563	557	52	44	48	40	7	7
BIOLOGICAL SCIENTISTS	2652	13553	12901	1957	1891	10275	9799	1241	1212	3278	3102	716	679
MEDICAL SCIENTISTS	2653	20641	20441	8352	7280	16363	16548	6957	6052	4278	3893	1395	1228
OTHER LIFE SCIENTISTS	2654	1121	1414	302	375	493	624	132	162	628	790	170	213
PSYCHOLOGISTS (TOTAL)	2660	4915	4875	2560	2486	3598	3604	1593	1549	1317	1271	967	937
SOCIAL SCIENTISTS (TOTAL)	2670	11594	11543	4880	4720	9350	9340	3674	3576	2244	2203	1206	1144
ECONOMISTS	2671	3592	3556	1564	1495	3218	3197	1383	1309	374	359	181	186
POLITICAL SCIENTISTS	2672	2875	2863	1066	1051	2495	2480	868	852	380	383	198	199
SOCIOLOGISTS	2673	3102	3099	1377	1316	2190	2175	860	844	912	924	517	472
OTHER SOCIAL SCIENTISTS	2674	2025	2025	873	858	1447	1488	563	571	578	537	310	287
TOTAL	2600	78078	76804	25350	23362	63822	63236	19491	17950	14256	13568	5859	5412

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	9250	9002	7237	7128	2013	1874	7986.	7826.	2906.	2968.	36.4	37.9
AERONAUTICAL & ASTRONAUTICAL	2711	489	596	404	485	85	111	436.	530.	184.	254.	42.2	48.0
CHEMICAL ENGINEERS	2712	651	655	560	547	91	108	606.	592.	203.	185.	33.4	31.3
CIVIL ENGINEERS	2713	1195	1122	893	862	302	260	989.	955.	167.	195.	16.9	20.4
ELECTRICAL ENGINEERS	2714	2969	2805	2335	2291	634	514	2566.	2467.	1118.	1109.	43.6	44.9
MECHANICAL ENGINEERS	2715	1828	1738	1393	1326	435	412	1563.	1480.	443.	450.	28.4	30.4
OTHER ENGINEERS	2716	2118	2086	1652	1617	466	469	1825.	1801.	790.	775.	43.3	43.1
PHYSICAL SCIENTISTS (TOTAL)	2720	11549	11306	9713	9640	1836	1666	10574.	10449.	3183.	3138.	30.1	30.0
ASTRONOMERS	2721	317	286	276	250	41	36	291.	265.	151.	118.	52.0	44.7
CHEMISTS	2722	6126	5746	5176	4858	950	888	5630.	5306.	1601.	1295.	28.4	24.4
PHYSICISTS	2723	4357	4603	3727	4051	630	552	4015.	4308.	1159.	1465.	28.9	34.0
OTHER PHYSICAL SCIENTISTS	2724	749	671	534	481	215	190	638.	570.	273.	259.	42.7	45.4
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	2074	2043	1727	1689	347	354	1901.	1862.	756.	597.	39.8	32.1
ATMOSPHERIC SCIENTISTS	2731	113	137	97	118	16	19	109.	130.	49.	61.	45.2	47.1
EARTH SCIENTISTS	2732	1276	1285	1052	1045	224	240	1162.	1173.	288.	247.	24.8	21.0
OCEANOGRAPHERS	2733	461	394	434	369	27	25	455.	381.	358.	206.	78.7	54.2
OTHER ENVIRONMENTAL SCIENTISTS	2734	224	227	144	157	80	70	175.	179.	61.	83.	35.0	46.3
MATHEMATICAL SCIENTISTS (TOTAL)	2740	10010	9241	6966	6576	3044	2665	8310.	7691.	1004.	983.	12.1	12.8
MATHEMATICIANS	2741	7249	6901	5250	5123	1999	1778	6164.	5924.	702.	697.	11.4	11.8
COMPUTER SCIENTISTS	2742	2761	2340	1716	1453	1045	887	2147.	1767.	302.	287.	14.1	16.2
LIFE SCIENTISTS (TOTAL)	2750	46596	44950	35926	35353	10670	9597	39970.	39064.	12253.	11869.	30.7	30.4
AGRICULTURAL SCIENTISTS	2751	670	648	611	597	59	51	646.	619.	224.	222.	34.7	35.8
BIOLOGICAL SCIENTISTS	2752	15510	14792	13553	12901	1957	1891	14506.	13700.	5243.	5001.	36.1	36.5
MEDICAL SCIENTISTS	2753	28993	27721	20641	20441	8352	7280	23584.	23156.	6496.	6337.	27.5	27.4
OTHER LIFE SCIENTISTS	2754	1423	1789	1121	1414	302	375	1234.	1589.	290.	309.	23.5	19.5
PSYCHOLOGISTS (TOTAL)	2760	7475	7361	4915	4875	2560	2486	5899.	5844.	630.	619.	10.7	10.6
SOCIAL SCIENTISTS (TOTAL)	2770	16474	16263	11594	11543	4880	4720	13610.	13435.	1153.	1196.	8.5	8.9
ECONOMISTS	2771	5156	5051	3592	3556	1564	1495	4242.	4141.	350.	367.	8.2	8.9
POLITICAL SCIENTISTS	2772	3941	3914	2875	2863	1066	1051	3308.	3282.	239.	244.	7.2	7.4
SOCIOLOGISTS	2773	4479	4415	3102	3099	1377	1316	3682.	3653.	228.	255.	6.2	7.0
OTHER SOCIAL SCIENTISTS	2774	2898	2883	2025	2025	873	858	2378.	2359.	336.	330.	14.1	14.0
TOTAL	2700	103428	100166	78078	76804	25350	23362	88250.	86171.	21885.	21370.	24.8	24.8

TABLE A1D

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	119098	116723	106907	104866	12191	11857
FIRST PROFESSIONAL	2220	48220	47252	33575	33738	14645	13514
MASTER'S	2230	34102	33514	24996	24939	9106	8575
BACHELOR'S OR THE EQUIVALENT	2240	21565	20022	16986	15932	4579	4090
TOTAL	2200	222985	217511	182464	179475	40521	38036

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	20862	20468	4126	4008	20184	19862	3883	3774	678	606	243	234
AERONAUTICAL & ASTRONAUTICAL	2611	846	945	115	168	831	924	111	158	15	21	4	10
CHEMICAL ENGINEERS	2612	1683	1690	276	380	1621	1633	258	359	62	57	18	21
CIVIL ENGINEERS	2613	3227	3176	601	620	3118	3083	565	591	109	93	36	29
ELECTRICAL ENGINEERS	2614	4731	4671	898	808	4630	4573	872	785	101	98	26	23
MECHANICAL ENGINEERS	2615	3504	3409	649	592	3415	3332	618	570	89	77	31	22
OTHER ENGINEERS	2616	6871	6577	1587	1440	6569	6317	1459	1311	302	260	128	129
PHYSICAL SCIENTISTS (TOTAL)	2620	16937	16749	2539	2445	15560	15470	1993	1905	1377	1279	546	540
ASTRONOMERS	2621	735	685	63	50	671	629	47	38	64	56	16	12
CHEMISTS	2622	8241	7761	1369	1439	7330	6944	983	1021	911	817	386	418
PHYSICISTS	2623	6952	7265	834	711	6655	6972	746	640	297	293	88	71
OTHER PHYSICAL SCIENTISTS	2624	1009	1038	273	245	904	925	217	206	105	113	56	39
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	6136	5913	785	820	5564	5422	578	632	572	491	207	188
ATMOSPHERIC SCIENTISTS	2631	669	701	99	103	624	661	79	89	45	40	20	14
EARTH SCIENTISTS	2632	3731	3562	490	512	3434	3301	385	414	297	261	105	98
OCEANOGRAPHERS	2633	1337	1257	99	105	1187	1136	60	68	150	121	39	37
OTHER ENVIRONMENTAL SCIENTISTS	2634	399	393	97	100	319	324	54	61	80	69	43	39
MATHEMATICAL SCIENTISTS (TOTAL)	2640	13379	12794	3141	2793	11635	11169	2321	2069	1744	1625	820	724
MATHEMATICIANS	2641	9368	9135	2069	1900	8265	8052	1399	1291	1103	1083	670	609
COMPUTER SCIENTISTS	2642	4011	3659	1072	893	3370	3117	922	778	641	542	150	115
LIFE SCIENTISTS (TOTAL)	2650	94175	92693	22109	20845	73460	73063	16807	16155	20715	19630	5302	4690
AGRICULTURAL SCIENTISTS	2651	12458	12549	1038	949	11234	11358	839	763	1224	1191	199	186
BIOLOGICAL SCIENTISTS	2652	29353	28133	3513	3207	22996	22199	2229	2028	6357	5934	1284	1179
MEDICAL SCIENTISTS	2653	48647	48411	16619	15771	37543	37895	13294	12901	11104	10516	3325	2870
OTHER LIFE SCIENTISTS	2654	3717	3600	939	918	1687	1611	445	463	2030	1989	494	455
PSYCHOLOGISTS (TOTAL)	2660	8192	8042	2204	2140	6169	6102	1341	1225	2023	1940	863	915
SOCIAL SCIENTISTS (TOTAL)	2670	22783	22816	5617	4985	18479	18450	3853	3493	4304	4366	1764	1492
ECONOMISTS	2671	6676	6687	1514	1400	6052	6074	1296	1175	624	613	218	225
POLITICAL SCIENTISTS	2672	4566	4350	1029	1022	3966	3789	791	808	600	561	238	214
SOCIOLOGISTS	2673	5184	5189	1423	1119	3779	3815	749	602	1405	1374	674	517
OTHER SOCIAL SCIENTISTS	2674	6357	6590	1651	1444	4682	4772	1017	908	1675	1818	634	536
TOTAL	2600	182464	179475	40521	38036	151051	149538	30776	29253	31413	29937	9745	8783

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	24988	24476	20862	20468	4126	4008	22121.	21825.	6641.	6874.	30.0	31.5
AERONAUTICAL & ASTRONAUTICAL	2711	961	1113	846	945	115	168	876.	1003.	276.	387.	31.5	38.6
CHEMICAL ENGINEERS	2712	1959	2070	1683	1690	276	380	1779.	1855.	503.	553.	28.3	29.8
CIVIL ENGINEERS	2713	3828	3796	3227	3176	601	620	3396.	3380.	671.	708.	19.8	20.9
ELECTRICAL ENGINEERS	2714	5629	5479	4731	4671	898	808	4986.	4902.	1730.	1769.	34.7	36.1
MECHANICAL ENGINEERS	2715	4153	4001	3504	3409	649	592	3698.	3598.	852.	915.	23.0	25.4
OTHER ENGINEERS	2716	8458	8017	6871	6577	1587	1440	7385.	7088.	2609.	2541.	35.3	35.9
PHYSICAL SCIENTISTS (TOTAL)	2720	19476	19194	16937	16749	2539	2445	17826.	17695.	6750.	6764.	37.9	38.2
ASTRONOMERS	2721	798	735	735	685	63	50	729.	681.	365.	362.	50.0	53.2
CHEMISTS	2722	9610	9200	8241	7761	1369	1439	8761.	8363.	3201.	2848.	36.5	34.1
PHYSICISTS	2723	7786	7976	6952	7265	834	711	7198.	7483.	2474.	2810.	34.4	37.6
OTHER PHYSICAL SCIENTISTS	2724	1282	1283	1009	1038	273	245	1138.	1167.	710.	744.	62.4	63.7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	6921	6733	6136	5913	785	820	6358.	6212.	2769.	2601.	43.6	41.9
ATMOSPHERIC SCIENTISTS	2731	768	804	669	701	99	103	691.	731.	393.	424.	56.8	57.9
EARTH SCIENTISTS	2732	4221	4074	3731	3562	490	512	3878.	3767.	1175.	1100.	30.3	29.2
OCEANOGRAPHERS	2733	1436	1362	1337	1257	99	105	1352.	1281.	965.	827.	71.4	64.6
OTHER ENVIRONMENTAL SCIENTISTS	2734	496	493	399	393	97	100	437.	433.	237.	251.	54.2	57.9
MATHEMATICAL SCIENTISTS (TOTAL)	2740	16520	15587	13379	12794	3141	2793	14515.	13843.	1933.	1931.	13.3	14.0
MATHEMATICIANS	2741	11437	11035	9368	9135	2069	1900	10182.	9952.	1228.	1219.	12.1	12.2
COMPUTER SCIENTISTS	2742	5083	4552	4011	3659	1072	893	4333.	3891.	705.	712.	16.3	18.3
LIFE SCIENTISTS (TOTAL)	2750	116284	113538	94175	92693	22109	20845	101587.	99663.	32341.	31544.	31.8	31.7
AGRICULTURAL SCIENTISTS	2751	13496	13498	12458	12549	1038	949	12918.	12800.	5620.	5552.	43.5	43.4
BIOLOGICAL SCIENTISTS	2752	32866	31340	29353	28133	3513	3207	30806.	29290.	12481.	11949.	40.5	40.8
MEDICAL SCIENTISTS	2753	65266	64182	48647	48411	16619	15771	53825.	53594.	13625.	13360.	25.3	24.9
OTHER LIFE SCIENTISTS	2754	4656	4518	3717	3600	939	918	4038.	3978.	615.	682.	15.2	17.2
PSYCHOLOGISTS (TOTAL)	2760	10396	10182	8192	8042	2204	2140	8921.	8807.	1455.	1486.	16.3	16.9
SOCIAL SCIENTISTS (TOTAL)	2770	28400	27801	22783	22816	5617	4985	24846.	24528.	3436.	3536.	13.8	14.4
ECONOMISTS	2771	8190	8087	6676	6687	1514	1400	7196.	7127.	1246.	1320.	17.3	18.5
POLITICAL SCIENTISTS	2772	5595	5372	4566	4350	1029	1022	4918.	4715.	529.	526.	10.7	11.2
SOCIOLOGISTS	2773	6607	6308	5184	5189	1423	1119	5821.	5605.	656.	695.	11.3	12.4
OTHER SOCIAL SCIENTISTS	2774	8008	8034	6357	6590	1651	1444	6912.	7081.	1005.	996.	14.5	14.1
TOTAL	2700	222985	217511	182464	179475	40521	38036	196174.	192573.	55325.	54736.	28.2	28.4

TABLE A1E

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PUBLIC DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	83526	81932	76121	74513	7405	7419
FIRST PROFESSIONAL	2220	24411	24237	16930	17040	7481	7197
MASTER'S	2230	26360	25964	20193	20247	6167	5717
BACHELOR'S OR THE EQUIVALENT	2240	16605	15503	12885	12158	3720	3345
TOTAL	2200	150902	147636	126129	123958	24773	23678

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	14809	14430	2834	2755	14308	13989	2636	2567	501	441	198	188
AERONAUTICAL & ASTRONAUTICAL	2611	499	501	50	73	490	491	49	72	9	10	1	1
CHEMICAL ENGINEERS	2612	1181	1199	212	301	1134	1153	199	286	47	46	13	15
CIVIL ENGINEERS	2613	2547	2510	397	434	2468	2435	370	414	79	75	27	20
ELECTRICAL ENGINEERS	2614	2761	2720	497	475	2705	2670	486	457	56	50	11	18
MECHANICAL ENGINEERS	2615	2427	2366	407	366	2355	2309	380	347	72	57	27	19
OTHER ENGINEERS	2616	5394	5134	1271	1106	5156	4931	1152	991	238	203	119	115
PHYSICAL SCIENTISTS (TOTAL)	2620	11040	10917	1753	1724	10119	10066	1365	1328	921	851	388	396
ASTRONOMERS	2621	493	465	46	31	448	422	35	23	45	43	11	8
CHEMISTS	2622	5441	5278	1039	1116	4820	4721	734	783	621	557	305	333
PHYSICISTS	2623	4545	4539	562	482	4346	4357	504	432	199	182	58	50
OTHER PHYSICAL SCIENTISTS	2624	561	635	106	95	505	566	92	90	56	69	14	5
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	4815	4638	589	627	4409	4297	443	487	406	341	146	140
ATMOSPHERIC SCIENTISTS	2631	580	590	94	95	542	558	74	81	38	32	20	14
EARTH SCIENTISTS	2632	3037	2896	383	411	2799	2696	300	332	238	200	83	79
OCEANOGRAPHERS	2633	910	894	77	84	824	824	47	51	86	70	30	33
OTHER ENVIRONMENTAL SCIENTISTS	2634	288	258	35	37	244	219	22	23	44	39	13	14
MATHEMATICAL SCIENTISTS (TOTAL)	2640	9934	9578	1958	1683	8597	8323	1358	1146	1337	1255	600	537
MATHEMATICIANS	2641	7012	6831	1405	1258	6169	6011	893	788	843	820	512	470
COMPUTER SCIENTISTS	2642	2922	2747	553	425	2428	2312	465	358	494	435	88	67
LIFE SCIENTISTS (TOTAL)	2650	62568	61444	12997	12637	48803	48458	9359	9508	13765	12986	3638	3129
AGRICULTURAL SCIENTISTS	2651	11990	12092	1008	928	10807	10933	813	745	1183	1159	195	183
BIOLOGICAL SCIENTISTS	2652	19179	18565	2495	2223	15271	14899	1522	1346	3908	3666	973	877
MEDICAL SCIENTISTS	2653	28522	28428	8742	8879	21480	21607	6669	7094	7042	6821	2073	1785
OTHER LIFE SCIENTISTS	2654	2877	2359	752	607	1245	1019	355	323	1632	1340	397	284
PSYCHOLOGISTS (TOTAL)	2660	5863	5776	1111	1177	4453	4410	645	625	1410	1366	466	552
SOCIAL SCIENTISTS (TOTAL)	2670	17100	17175	3531	3075	13837	13831	2267	2012	3263	3344	1264	1063
ECONOMISTS	2671	4868	4876	867	787	4412	4426	708	616	456	450	159	171
POLITICAL SCIENTISTS	2672	3199	2983	517	499	2771	2604	360	373	428	379	157	126
SOCIOLOGISTS	2673	3964	3987	987	762	2909	2961	502	399	1055	1026	485	363
OTHER SOCIAL SCIENTISTS	2674	5069	5329	1160	1027	3745	3840	697	624	1324	1489	463	403
TOTAL	2600	126129	123958	24773	23678	104526	103374	18073	17673	21603	20584	6700	6005

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	17643	17185	14809	14430	2834	2755	15645.	15360.	3794.	3952.	24.3	25.7
AERONAUTICAL & ASTRONAUTICAL	2711	549	574	499	501	50	73	506.	519.	95.	134.	18.7	25.9
CHEMICAL ENGINEERS	2712	1393	1500	1181	1199	212	301	1244.	1334.	303.	370.	24.4	27.8
CIVIL ENGINEERS	2713	2944	2944	2547	2510	397	434	2659.	2651.	509.	516.	19.1	19.5
ELECTRICAL ENGINEERS	2714	3258	3195	2761	2720	497	475	2890.	2848.	627.	678.	21.7	23.8
MECHANICAL ENGINEERS	2715	2834	2732	2427	2366	407	366	2539.	2482.	420.	470.	16.5	18.9
OTHER ENGINEERS	2716	6665	6240	5394	5134	1271	1106	5805.	5527.	1840.	1783.	31.7	32.3
PHYSICAL SCIENTISTS (TOTAL)	2720	12793	12641	11040	10917	1753	1724	11591.	11532.	3709.	3757.	32.0	32.6
ASTRONOMERS	2721	539	496	493	465	46	31	482.	452.	216.	247.	44.8	54.7
CHEMISTS	2722	6480	6394	5441	5278	1039	1116	5813.	5725.	1690.	1628.	29.1	28.4
PHYSICISTS	2723	5107	5021	4545	4539	562	482	4686.	4661.	1365.	1396.	29.1	30.0
OTHER PHYSICAL SCIENTISTS	2724	667	730	561	635	106	95	609.	694.	437.	485.	71.8	69.9
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	5404	5265	4815	4638	589	627	4953.	4862.	2031.	2024.	41.0	41.6
ATMOSPHERIC SCIENTISTS	2731	674	685	580	590	94	95	599.	617.	344.	363.	57.5	58.9
EARTH SCIENTISTS	2732	3420	3307	3037	2896	383	411	3144.	3058.	898.	869.	28.6	28.4
OCEANOGRAPHERS	2733	987	978	910	894	77	84	907.	909.	611.	624.	67.3	68.6
OTHER ENVIRONMENTAL SCIENTISTS	2734	323	295	288	258	35	37	303.	278.	178.	168.	58.8	60.5
MATHEMATICAL SCIENTISTS (TOTAL)	2740	11892	11261	9934	9578	1958	1683	10635.	10252.	973.	988.	9.2	9.6
MATHEMATICIANS	2741	8417	8089	7012	6831	1405	1258	7560.	7376.	560.	553.	7.4	7.5
COMPUTER SCIENTISTS	2742	3475	3172	2922	2747	553	425	3075.	2876.	414.	436.	13.4	15.1
LIFE SCIENTISTS (TOTAL)	2750	75565	74081	62568	61444	12997	12637	66601.	65311.	20228.	19766.	30.4	30.3
AGRICULTURAL SCIENTISTS	2751	12998	13020	11990	12092	1008	928	12434.	12333.	5401.	5337.	43.4	43.3
BIOLOGICAL SCIENTISTS	2752	21674	20788	19179	18565	2495	2223	20111.	19330.	7362.	7025.	36.6	36.3
MEDICAL SCIENTISTS	2753	37264	37307	28522	28428	8742	8879	30929.	31034.	7138.	7031.	23.1	22.7
OTHER LIFE SCIENTISTS	2754	3629	2966	2877	2359	752	607	3127.	2615.	327.	373.	10.4	14.3
PSYCHOLOGISTS (TOTAL)	2760	6974	6953	5863	5776	1111	1177	6196.	6204.	866.	920.	14.0	14.8
SOCIAL SCIENTISTS (TOTAL)	2770	20631	20250	17100	17175	3531	3075	18326.	18196.	2366.	2397.	12.9	13.2
ECONOMISTS	2771	5735	5663	4868	4876	867	787	5129.	5106.	921.	974.	17.9	19.1
POLITICAL SCIENTISTS	2772	3716	3482	3199	2983	517	499	3362.	3165.	309.	296.	9.2	9.4
SOCIOLOGISTS	2773	4951	4749	3964	3987	987	762	4420.	4251.	452.	455.	10.2	10.7
OTHER SOCIAL SCIENTISTS	2774	6229	6356	5069	5329	1160	1027	5415.	5674.	684.	672.	12.6	11.8
TOTAL	2700	150902	147636	126129	123958	24773	23678	133945.	131716.	33967.	33803.	25.4	25.7

TABLE A1F

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PRIVATE DOCTORATE GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	35572	34791	30786	30353	4786	4438
FIRST PROFESSIONAL	2220	23809	23015	16645	16698	7164	6317
MASTER'S	2230	7742	7550	4803	4692	2939	2858
BACHELOR'S OR THE EQUIVALENT	2240	4960	4519	4101	3774	859	745
TOTAL	2200	72083	69875	56335	55517	15748	14358

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	6053	6038	1292	1253	5876	5873	1247	1207	177	165	45	46
AERONAUTICAL & ASTRONAUTICAL	2611	347	444	65	95	341	433	62	86	6	11	3	9
CHEMICAL ENGINEERS	2612	502	491	64	79	487	480	59	73	15	11	5	6
CIVIL ENGINEERS	2613	680	666	204	186	650	648	195	177	30	18	9	9
ELECTRICAL ENGINEERS	2614	1970	1951	401	333	1925	1903	386	328	45	48	15	5
MECHANICAL ENGINEERS	2615	1077	1043	242	226	1060	1023	238	223	17	20	4	3
OTHER ENGINEERS	2616	1477	1443	316	334	1413	1386	307	320	64	57	9	14
PHYSICAL SCIENTISTS (TOTAL)	2620	5897	5832	786	721	5441	5404	628	577	456	428	158	144
ASTRONOMERS	2621	242	220	17	19	223	207	12	15	19	13	5	4
CHEMISTS	2622	2800	2483	330	323	2510	2223	249	238	290	260	81	85
PHYSICISTS	2623	2407	2726	272	229	2309	2615	242	208	98	111	30	21
OTHER PHYSICAL SCIENTISTS	2624	448	403	167	150	399	359	125	116	49	44	42	34
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1321	1275	196	193	1155	1125	135	145	166	150	61	48
ATMOSPHERIC SCIENTISTS	2631	89	111	5	8	82	103	5	8	7	8	0	0
EARTH SCIENTISTS	2632	694	666	107	101	635	605	85	82	59	61	22	19
OCEANOGRAPHERS	2633	427	363	22	21	363	312	13	17	64	51	9	4
OTHER ENVIRONMENTAL SCIENTISTS	2634	111	135	62	63	75	105	32	38	36	30	30	25
MATHEMATICAL SCIENTISTS (TOTAL)	2640	3445	3216	1183	1110	3038	2846	963	923	407	370	220	187
MATHEMATICIANS	2641	2356	2304	664	642	2096	2041	506	503	260	263	158	139
COMPUTER SCIENTISTS	2642	1089	912	519	468	942	805	457	420	147	107	62	48
LIFE SCIENTISTS (TOTAL)	2650	31607	31249	9112	8208	24657	24605	7448	6647	6950	6644	1664	1561
AGRICULTURAL SCIENTISTS	2651	468	457	30	21	427	425	26	18	41	32	4	3
BIOLOGICAL SCIENTISTS	2652	10174	9568	1018	984	7725	7300	707	682	2449	2268	311	302
MEDICAL SCIENTISTS	2653	20125	19983	7877	6892	16063	16288	6625	5807	4062	3695	1252	1085
OTHER LIFE SCIENTISTS	2654	840	1241	187	311	442	592	90	160	398	649	97	171
PSYCHOLOGISTS (TOTAL)	2660	2329	2266	1093	963	1716	1692	696	600	613	574	397	363
SOCIAL SCIENTISTS (TOTAL)	2670	5683	5641	2086	1910	4642	4619	1586	1481	1041	1022	500	429
ECONOMISTS	2671	1808	1811	647	613	1646	1648	588	559	168	163	59	54
POLITICAL SCIENTISTS	2672	1367	1367	512	523	1195	1185	431	435	172	182	81	88
SOCIOLOGISTS	2673	1220	1202	436	357	870	854	247	203	350	348	189	154
OTHER SOCIAL SCIENTISTS	2674	1288	1261	491	417	937	932	320	284	351	329	171	133
TOTAL	2600	56335	55517	15748	14358	46525	46164	12703	11580	9810	9353	3045	2778

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	7345	7291	6053	6038	1292	1253	6476.	6466.	2848.	2922.	44.0	45.2
AERONAUTICAL & ASTRONAUTICAL	2711	412	539	347	444	65	95	370.	484.	182.	253.	49.0	52.3
CHEMICAL ENGINEERS	2712	566	570	502	491	64	79	535.	521.	200.	182.	37.4	35.0
CIVIL ENGINEERS	2713	884	852	680	666	204	186	736.	729.	162.	192.	22.0	26.4
ELECTRICAL ENGINEERS	2714	2371	2284	1970	1951	401	333	2096.	2054.	1103.	1091.	52.6	53.1
MECHANICAL ENGINEERS	2715	1319	1269	1077	1043	242	226	1159.	1116.	433.	445.	37.3	39.8
OTHER ENGINEERS	2716	1793	1777	1477	1443	316	334	1580.	1561.	769.	758.	48.7	48.6
PHYSICAL SCIENTISTS (TOTAL)	2720	6683	6553	5897	5832	786	721	6235.	6163.	3041.	3008.	48.8	48.8
ASTRONOMERS	2721	259	239	242	220	17	19	247.	230.	149.	115.	60.2	50.2
CHEMISTS	2722	3130	2806	2800	2483	330	323	2948.	2638.	1511.	1220.	51.3	46.2
PHYSICISTS	2723	2679	2955	2407	2726	272	229	2512.	2822.	1109.	1414.	44.1	50.1
OTHER PHYSICAL SCIENTISTS	2724	615	553	448	403	167	150	528.	473.	273.	259.	51.6	54.7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1517	1468	1321	1275	196	193	1405.	1350.	738.	577.	52.5	42.8
ATMOSPHERIC SCIENTISTS	2731	94	119	89	111	5	8	92.	114.	48.	60.	52.7	52.7
EARTH SCIENTISTS	2732	801	767	694	666	107	101	734.	709.	277.	231.	37.7	32.6
OCEANOGRAPHERS	2733	449	384	427	363	22	21	445.	372.	354.	203.	79.6	54.7
OTHER ENVIRONMENTAL SCIENTISTS	2734	173	198	111	135	62	63	134.	155.	59.	82.	43.8	53.1
MATHEMATICAL SCIENTISTS (TOTAL)	2740	4628	4326	3445	3216	1183	1110	3880.	3591.	960.	943.	24.7	26.3
MATHEMATICIANS	2741	3020	2946	2356	2304	664	642	2622.	2577.	668.	666.	25.5	25.9
COMPUTER SCIENTISTS	2742	1608	1380	1089	912	519	468	1258.	1015.	292.	277.	23.2	27.3
LIFE SCIENTISTS (TOTAL)	2750	40719	39457	31607	31249	9112	8208	34986.	34352.	12112.	11778.	34.6	34.3
AGRICULTURAL SCIENTISTS	2751	498	478	468	457	30	21	484.	468.	219.	216.	45.3	46.1
BIOLOGICAL SCIENTISTS	2752	11192	10552	10174	9568	1018	984	10695.	9961.	5118.	4924.	47.9	49.4
MEDICAL SCIENTISTS	2753	28002	26875	20125	19983	7877	6892	22896.	22560.	6487.	6329.	28.3	28.1
OTHER LIFE SCIENTISTS	2754	1027	1552	840	1241	187	311	910.	1364.	288.	309.	31.6	22.7
PSYCHOLOGISTS (TOTAL)	2760	3422	3229	2329	2266	1093	963	2727.	2603.	589.	565.	21.6	21.7
SOCIAL SCIENTISTS (TOTAL)	2770	7769	7551	5683	5641	2086	1910	6521.	6332.	1070.	1139.	16.4	18.0
ECONOMISTS	2771	2455	2424	1808	1811	647	613	2067.	2021.	325.	346.	15.7	17.1
POLITICAL SCIENTISTS	2772	1879	1890	1367	1367	512	523	1556.	1550.	219.	230.	14.1	14.8
SOCIOLOGISTS	2773	1656	1559	1220	1202	436	357	1401.	1354.	205.	240.	14.6	17.7
OTHER SOCIAL SCIENTISTS	2774	1779	1678	1288	1261	491	417	1497.	1407.	321.	324.	21.5	23.0
TOTAL	2700	72083	69875	56335	55517	15748	14358	62230.	60857.	21358.	20932.	34.3	34.4

TABLE A1G

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	23459	23380	20540	20561	2919	2819
FIRST PROFESSIONAL	2220	398	333	163	131	235	202
MASTER'S	2230	11282	11366	6321	6571	4961	4795
BACHELOR'S OR THE EQUIVALENT	2240	2516	2417	826	732	1690	1685
TOTAL	2200	37655	37496	27850	27995	9805	9501

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	1974	1851	1138	923	1933	1818	1090	910	41	33	48	13
AERONAUTICAL & ASTRONAUTICAL	2611	22	23	19	17	21	22	19	17	1	1	0	0
CHEMICAL ENGINEERS	2612	133	104	62	44	130	103	48	44	3	1	14	0
CIVIL ENGINEERS	2613	428	411	242	172	420	403	236	170	8	8	6	2
ELECTRICAL ENGINEERS	2614	529	502	338	273	521	496	330	271	8	6	8	2
MECHANICAL ENGINEERS	2615	474	441	255	241	467	437	246	238	7	4	9	3
OTHER ENGINEERS	2616	388	370	222	176	374	357	211	170	14	13	11	6
PHYSICAL SCIENTISTS (TOTAL)	2620	3984	4027	1003	994	3642	3686	729	715	342	341	274	279
ASTRONOMERS	2621	54	52	12	5	50	48	10	5	4	4	2	0
CHEMISTS	2622	2259	2307	582	605	1997	2049	374	386	262	258	208	219
PHYSICISTS	2623	1550	1535	365	338	1490	1475	318	297	60	60	47	41
OTHER PHYSICAL SCIENTISTS	2624	121	133	44	46	105	114	27	27	16	19	17	19
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1140	1145	257	253	1064	1072	215	212	76	73	42	41
ATMOSPHERIC SCIENTISTS	2631	65	54	16	17	64	52	16	17	1	2	0	0
EARTH SCIENTISTS	2632	950	1000	192	194	892	939	160	157	58	61	32	37
OCEANOGRAPHERS	2633	66	43	12	23	60	37	10	23	6	6	2	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	99	48	37	19	88	44	29	15	11	4	8	4
MATHEMATICAL SCIENTISTS (TOTAL)	2640	4655	4509	1982	1660	3881	3838	1419	1151	774	671	563	509
MATHEMATICIANS	2641	3600	3671	1396	1179	2989	3098	939	747	611	573	457	432
COMPUTER SCIENTISTS	2642	1055	838	586	481	892	740	480	404	163	98	106	77
LIFE SCIENTISTS (TOTAL)	2650	4948	5116	1242	1356	3886	4002	760	807	1062	1114	482	549
AGRICULTURAL SCIENTISTS	2651	625	670	82	100	574	603	63	78	51	67	19	22
BIOLOGICAL SCIENTISTS	2652	3515	3669	808	960	2936	3077	501	567	579	592	307	393
MEDICAL SCIENTISTS	2653	446	450	196	214	272	256	115	136	174	194	81	78
OTHER LIFE SCIENTISTS	2654	362	327	156	82	104	66	81	26	258	261	75	56
PSYCHOLOGISTS (TOTAL)	2660	3483	3642	1336	1494	2651	2777	799	928	832	865	537	566
SOCIAL SCIENTISTS (TOTAL)	2670	7666	7705	2847	2821	6250	6303	2134	2100	1416	1402	713	721
ECONOMISTS	2671	1939	1893	968	924	1737	1687	833	783	202	206	135	141
POLITICAL SCIENTISTS	2672	1830	1868	577	546	1603	1640	453	419	227	228	124	127
SOCIOLOGISTS	2673	2189	2323	714	755	1582	1709	451	476	607	614	263	279
OTHER SOCIAL SCIENTISTS	2674	1708	1621	588	596	1328	1267	397	422	380	354	191	174
TOTAL	2600	27850	27995	9805	9501	23307	23496	7146	6823	4543	4499	2659	2678

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	3112	2774	1974	1851	1138	923	2313.	2164.	97.	98.	4.2	4.5
AERONAUTICAL & ASTRONAUTICAL	2711	41	40	22	23	19	17	27.	29.	3.	1.	10.0	3.7
CHEMICAL ENGINEERS	2712	195	148	133	104	62	44	158.	122.	7.	7.	4.5	5.4
CIVIL ENGINEERS	2713	670	583	428	411	242	172	500.	469.	16.	17.	3.2	3.6
ELECTRICAL ENGINEERS	2714	867	775	529	502	338	273	638.	576.	26.	28.	4.1	4.9
MECHANICAL ENGINEERS	2715	729	682	474	441	255	241	549.	535.	24.	19.	4.4	3.6
OTHER ENGINEERS	2716	610	546	388	370	222	176	440.	433.	21.	26.	4.8	6.0
PHYSICAL SCIENTISTS (TOTAL)	2720	4987	5021	3984	4027	1003	994	4444.	4516.	229.	177.	5.2	3.9
ASTRONOMERS	2721	66	57	54	52	12	5	73.	66.	2.	1.	2.2	1.8
CHEMISTS	2722	2841	2912	2259	2307	582	605	2536.	2644.	133.	106.	5.2	4.0
PHYSICISTS	2723	1915	1873	1550	1535	365	338	1696.	1684.	61.	70.	3.6	4.1
OTHER PHYSICAL SCIENTISTS	2724	165	179	121	133	44	46	138.	122.	34.	1.	24.4	0.4
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1397	1398	1140	1145	257	253	1255.	1272.	83.	76.	6.6	6.0
ATMOSPHERIC SCIENTISTS	2731	61	71	45	54	16	17	53.	61.	5.	3.	9.0	4.1
EARTH SCIENTISTS	2732	1142	1194	950	1000	192	194	1036.	1106.	51.	58.	4.9	5.3
OCEANOGRAPHERS	2733	58	66	46	43	12	23	49.	48.	17.	12.	34.2	25.6
OTHER ENVIRONMENTAL SCIENTISTS	2734	136	67	99	48	37	19	117.	57.	10.	3.	8.5	5.3
MATHEMATICAL SCIENTISTS (TOTAL)	2740	6637	6169	4655	4509	1982	1660	5473.	5196.	99.	102.	1.8	2.0
MATHEMATICIANS	2741	4996	4850	3600	3671	1396	1179	4190.	4136.	70.	79.	1.7	1.9
COMPUTER SCIENTISTS	2742	1641	1319	1055	838	586	481	1283.	1060.	29.	23.	2.2	2.2
LIFE SCIENTISTS (TOTAL)	2750	6190	6472	4948	5116	1242	1356	5451.	5660.	304.	320.	5.6	5.7
AGRICULTURAL SCIENTISTS	2751	707	770	625	670	82	100	662.	704.	85.	95.	12.8	13.5
BIOLOGICAL SCIENTISTS	2752	4323	4629	3515	3669	808	960	3862.	4063.	192.	195.	5.0	4.8
MEDICAL SCIENTISTS	2753	642	664	446	450	196	214	521.	541.	21.	26.	4.1	4.7
OTHER LIFE SCIENTISTS	2754	518	409	362	327	156	82	406.	352.	6.	4.	1.4	1.2
PSYCHOLOGISTS (TOTAL)	2760	4819	5136	3483	3642	1336	1494	3923.	4228.	74.	85.	1.9	2.0
SOCIAL SCIENTISTS (TOTAL)	2770	10513	10526	7666	7705	2847	2821	8658.	8824.	254.	219.	2.9	2.5
ECONOMISTS	2771	2907	2817	1939	1893	968	924	2289.	2299.	41.	36.	1.8	1.6
POLITICAL SCIENTISTS	2772	2407	2414	1830	1868	577	546	2022.	2086.	45.	42.	2.2	2.0
SOCIOLOGISTS	2773	2903	3078	2189	2323	714	755	2440.	2586.	91.	74.	3.7	2.9
OTHER SOCIAL SCIENTISTS	2774	2296	2217	1708	1621	588	596	1907.	1853.	77.	67.	4.1	3.6
TOTAL	2700	37655	37496	27850	27995	9805	9501	31516.	31859.	1141.	1077.	3.6	3.4

TABLE A1H

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PUBLIC MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	17837	17957	16153	16269	1684	1688
FIRST PROFESSIONAL	2220	225	202	99	82	126	120
MASTER'S	2230	8110	8170	4938	5155	3172	3015
BACHELOR'S OR THE EQUIVALENT	2240	2044	1969	666	576	1378	1393
TOTAL	2200	28216	28298	21856	22082	6360	6216

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	1398	1340	793	601	1365	1315	752	591	33	25	41	10
AERONAUTICAL & ASTRONAUTICAL	2611	16	17	16	14	16	17	16	14	0	0	0	0
CHEMICAL ENGINEERS	2612	96	69	46	25	93	68	32	25	3	1	14	0
CIVIL ENGINEERS	2613	335	329	184	138	327	321	178	136	8	8	6	2
ELECTRICAL ENGINEERS	2614	331	318	233	186	326	315	227	184	5	3	6	2
MECHANICAL ENGINEERS	2615	291	279	159	123	285	275	154	122	6	4	5	1
OTHER ENGINEERS	2616	329	328	155	115	318	319	145	110	11	9	10	5
PHYSICAL SCIENTISTS (TOTAL)	2620	2982	3031	631	675	2745	2788	462	496	237	243	169	179
ASTRONOMERS	2621	45	42	8	3	42	40	7	3	3	2	1	0
CHEMISTS	2622	1672	1719	368	423	1498	1545	238	280	174	174	130	143
PHYSICISTS	2623	1155	1151	226	213	1110	1102	197	186	45	49	29	27
OTHER PHYSICAL SCIENTISTS	2624	110	119	29	36	95	101	20	27	15	18	9	9
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	1038	1035	215	205	973	971	177	169	65	64	38	36
ATMOSPHERIC SCIENTISTS	2631	43	52	10	9	42	50	10	9	1	2	0	0
EARTH SCIENTISTS	2632	856	896	165	157	807	844	136	125	49	52	29	32
OCEANOGRAPHERS	2633	46	41	11	22	40	35	9	22	6	6	2	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	93	46	29	17	84	42	22	13	9	4	7	4
MATHEMATICAL SCIENTISTS (TOTAL)	2640	3725	3620	1401	1185	3109	3082	986	796	616	538	415	389
MATHEMATICIANS	2641	2887	2956	1011	857	2401	2495	673	524	486	461	338	333
COMPUTER SCIENTISTS	2642	838	664	390	328	708	587	313	272	130	77	77	56
LIFE SCIENTISTS (TOTAL)	2650	3904	4063	784	927	3112	3253	499	581	792	810	285	346
AGRICULTURAL SCIENTISTS	2651	599	638	80	94	548	573	61	72	51	65	19	22
BIOLOGICAL SCIENTISTS	2652	2752	2902	515	666	2340	2491	320	397	412	411	195	269
MEDICAL SCIENTISTS	2653	251	267	83	117	145	144	59	101	106	123	24	16
OTHER LIFE SCIENTISTS	2654	302	256	106	50	79	45	59	11	223	211	47	39
PSYCHOLOGISTS (TOTAL)	2660	2750	2885	757	856	2125	2232	440	520	625	653	317	336
SOCIAL SCIENTISTS (TOTAL)	2670	6059	6108	1779	1767	4967	5030	1323	1307	1092	1078	456	460
ECONOMISTS	2671	1442	1399	570	532	1296	1255	496	461	146	144	74	71
POLITICAL SCIENTISTS	2672	1385	1439	350	348	1229	1278	279	277	156	161	71	71
SOCIOLOGISTS	2673	1727	1854	377	437	1250	1370	220	255	477	484	157	182
OTHER SOCIAL SCIENTISTS	2674	1505	1416	482	450	1192	1127	328	314	313	289	154	136
TOTAL	2600	21856	22082	6360	6216	18396	18671	4639	4460	3460	3411	1721	1756

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	2191	1941	1398	1340	793	601	1618.	1531.	56.	70.	3.4	4.6
AERONAUTICAL & ASTRONAUTICAL	2711	32	31	16	17	16	14	18.	23.	0.	0.	0.0	0.3
CHEMICAL ENGINEERS	2712	142	94	96	69	46	25	114.	79.	4.	4.	3.8	4.6
CIVIL ENGINEERS	2713	519	467	335	329	184	138	389.	374.	10.	15.	2.6	3.9
ELECTRICAL ENGINEERS	2714	564	504	331	318	233	186	404.	365.	19.	21.	4.7	5.8
MECHANICAL ENGINEERS	2715	450	402	291	279	159	123	332.	322.	15.	15.	4.4	4.7
OTHER ENGINEERS	2716	484	443	329	328	155	115	360.	368.	8.	16.	2.1	4.3
PHYSICAL SCIENTISTS (TOTAL)	2720	3613	3706	2982	3031	631	675	3279.	3377.	189.	142.	5.8	4.2
ASTRONOMERS	2721	53	45	45	42	8	3	62.	56.	1.	0.	2.2	0.0
CHEMISTS	2722	2040	2142	1672	1719	368	423	1856.	1968.	109.	86.	5.9	4.4
PHYSICISTS	2723	1381	1364	1155	1151	226	213	1238.	1248.	45.	56.	3.6	4.5
OTHER PHYSICAL SCIENTISTS	2724	139	155	110	119	29	36	123.	104.	34.	1.	27.3	0.5
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1253	1240	1038	1035	215	205	1133.	1134.	78.	73.	6.9	6.5
ATMOSPHERIC SCIENTISTS	2731	53	61	43	52	10	9	45.	53.	4.	2.	8.4	2.9
EARTH SCIENTISTS	2732	1021	1053	856	896	165	157	932.	981.	50.	56.	5.3	5.7
OCEANOGRAPHERS	2733	57	63	46	41	11	22	49.	46.	17.	12.	34.5	26.7
OTHER ENVIRONMENTAL SCIENTISTS	2734	122	63	93	46	29	17	107.	54.	8.	3.	7.5	5.6
MATHEMATICAL SCIENTISTS (TOTAL)	2740	5126	4805	3725	3620	1401	1185	4308.	4111.	86.	88.	2.0	2.1
MATHEMATICIANS	2741	3898	3813	2887	2956	1011	857	3321.	3305.	63.	70.	1.9	2.1
COMPUTER SCIENTISTS	2742	1228	992	838	664	390	328	988.	805.	23.	18.	2.4	2.3
LIFE SCIENTISTS (TOTAL)	2750	4688	4990	3904	4063	784	927	4236.	4447.	260.	288.	6.1	6.5
AGRICULTURAL SCIENTISTS	2751	679	732	599	638	80	94	635.	674.	80.	89.	12.6	13.3
BIOLOGICAL SCIENTISTS	2752	3267	3568	2752	2902	515	666	2990.	3190.	162.	174.	5.4	5.5
MEDICAL SCIENTISTS	2753	334	384	251	267	83	117	281.	311.	14.	21.	4.9	6.6
OTHER LIFE SCIENTISTS	2754	408	306	302	256	106	50	330.	272.	4.	4.	1.1	1.5
PSYCHOLOGISTS (TOTAL)	2760	3507	3741	2750	2885	757	856	3000.	3244.	66.	70.	2.2	2.1
SOCIAL SCIENTISTS (TOTAL)	2770	7838	7875	6059	6108	1779	1767	6685.	6858.	216.	198.	3.2	2.9
ECONOMISTS	2771	2012	1931	1442	1399	570	532	1651.	1660.	30.	29.	1.8	1.7
POLITICAL SCIENTISTS	2772	1735	1787	1385	1439	350	348	1509.	1586.	38.	35.	2.5	2.2
SOCIOLOGISTS	2773	2104	2291	1727	1854	377	437	1858.	2017.	79.	69.	4.3	3.4
OTHER SOCIAL SCIENTISTS	2774	1987	1866	1505	1416	482	450	1667.	1596.	68.	65.	4.1	4.1
TOTAL	2700	28216	28298	21856	22082	6360	6216	24260.	24701.	951.	929.	3.9	3.8

TABLE A11

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PRIVATE MASTER'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	5622	5423	4387	4292	1235	1131
FIRST PROFESSIONAL	2220	173	131	64	49	109	82
MASTER'S	2230	3172	3196	1383	1416	1789	1780
BACHELOR'S OR THE EQUIVALENT	2240	472	448	160	156	312	292
TOTAL	2200	9439	9198	5994	5913	3445	3285

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	576	511	345	322	568	503	338	319	8	8	7	3
AERONAUTICAL & ASTRONAUTICAL	2611	6	6	3	3	5	5	3	3	1	1	0	0
CHEMICAL ENGINEERS	2612	37	35	16	19	37	35	16	19	0	0	0	0
CIVIL ENGINEERS	2613	93	82	58	34	93	82	58	34	0	0	0	0
ELECTRICAL ENGINEERS	2614	198	184	105	87	195	181	103	87	3	3	2	0
MECHANICAL ENGINEERS	2615	183	162	96	118	182	162	92	116	1	0	4	2
OTHER ENGINEERS	2616	59	42	67	61	56	38	66	60	3	4	1	1
PHYSICAL SCIENTISTS (TOTAL)	2620	1002	996	372	319	897	898	267	219	105	98	105	100
ASTRONOMERS	2621	9	10	4	2	8	8	3	2	1	2	1	0
CHEMISTS	2622	587	588	214	182	499	504	136	106	88	84	78	76
PHYSICISTS	2623	395	384	139	125	380	373	121	111	15	11	18	14
OTHER PHYSICAL SCIENTISTS	2624	11	14	15	10	10	13	7	0	1	1	8	10
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	102	110	42	48	91	101	38	43	11	9	4	5
ATMOSPHERIC SCIENTISTS	2631	2	2	6	8	2	2	6	8	0	0	0	0
EARTH SCIENTISTS	2632	94	104	27	37	85	95	24	32	9	9	3	5
OCEANOGRAPHERS	2633	0	2	1	1	0	2	1	1	0	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	6	2	8	2	4	2	7	2	2	0	1	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	930	889	581	475	772	756	433	355	158	133	148	120
MATHEMATICIANS	2641	713	715	385	322	588	603	266	223	125	112	119	99
COMPUTER SCIENTISTS	2642	217	174	196	153	184	153	167	132	33	21	29	21
LIFE SCIENTISTS (TOTAL)	2650	1044	1053	458	429	774	749	261	226	270	304	197	203
AGRICULTURAL SCIENTISTS	2651	26	32	2	6	26	30	2	6	0	2	0	0
BIOLOGICAL SCIENTISTS	2652	763	767	293	294	596	586	181	170	167	181	112	124
MEDICAL SCIENTISTS	2653	195	183	113	97	127	112	56	35	68	71	57	62
OTHER LIFE SCIENTISTS	2654	60	71	50	32	25	21	22	15	35	50	28	17
PSYCHOLOGISTS (TOTAL)	2660	733	757	579	638	526	545	359	408	207	212	220	230
SOCIAL SCIENTISTS (TOTAL)	2670	1607	1597	1068	1054	1283	1273	811	793	324	324	257	261
ECONOMISTS	2671	497	494	398	392	441	432	337	322	56	62	61	70
POLITICAL SCIENTISTS	2672	445	429	227	198	374	362	174	142	71	67	53	56
SOCIOLOGISTS	2673	462	469	337	318	332	339	231	221	130	130	106	97
OTHER SOCIAL SCIENTISTS	2674	203	205	106	146	136	140	69	108	67	65	37	38
TOTAL	2600	5994	5913	3445	3285	4911	4825	2507	2363	1083	1088	938	922

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	921	833	576	511	345	322	695.	633.	41.	27.	6.0	4.3
AERONAUTICAL & ASTRONAUTICAL	2711	9	9	6	6	3	3	9.	6.	3.	1.	30.4	16.7
CHEMICAL ENGINEERS	2712	53	54	37	35	16	19	43.	43.	3.	3.	6.2	6.7
CIVIL ENGINEERS	2713	151	116	93	82	58	34	111.	95.	6.	2.	5.1	2.2
ELECTRICAL ENGINEERS	2714	303	271	198	184	105	87	234.	211.	7.	7.	3.2	3.2
MECHANICAL ENGINEERS	2715	279	280	183	162	96	118	217.	213.	9.	4.	4.3	2.0
OTHER ENGINEERS	2716	126	103	59	42	67	61	80.	65.	14.	10.	16.9	15.8
PHYSICAL SCIENTISTS (TOTAL)	2720	1374	1315	1002	996	372	319	1164.	1139.	41.	35.	3.5	3.0
ASTRONOMERS	2721	13	12	9	10	4	2	11.	10.	0.	1.	2.5	12.0
CHEMISTS	2722	801	770	587	588	214	182	681.	676.	24.	20.	3.5	2.9
PHYSICISTS	2723	534	09	395	384	139	125	457.	436.	16.	14.	3.6	3.2
OTHER PHYSICAL SCIENTISTS	2724	26	4	11	14	15	10	15.	18.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	144	1	102	110	42	48	122.	138.	4.	3.	3.4	2.3
ATMOSPHERIC SCIENTISTS	2731	8		2	2	6	8	8.	9.	1.	1.	12.5	11.8
EARTH SCIENTISTS	2732	121	141	94	104	27	37	104.	124.	1.	2.	1.1	1.8
OCEANOGRAPHERS	2733	1	3	0	2	1	1	1.	2.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	14	4	6	2	8	2	10.	3.	2.	0.	20.5	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	1511	1364	930	889	581	475	1165.	1085.	13.	14.	1.1	1.3
MATHEMATICIANS	2741	1098	1037	713	715	385	322	869.	831.	7.	9.	0.8	1.1
COMPUTER SCIENTISTS	2742	413	327	217	174	196	153	296.	255.	6.	5.	1.9	2.0
LIFE SCIENTISTS (TOTAL)	2750	1502	1482	1044	1053	458	429	1215.	1212.	44.	32.	3.6	2.6
AGRICULTURAL SCIENTISTS	2751	28	38	26	32	2	6	27.	30.	5.	6.	17.6	18.9
BIOLOGICAL SCIENTISTS	2752	1056	1061	763	767	293	294	872.	873.	29.	21.	3.4	2.4
MEDICAL SCIENTISTS	2753	308	280	195	183	113	97	240.	230.	7.	5.	3.1	2.1
OTHER LIFE SCIENTISTS	2754	110	103	60	71	50	32	76.	80.	2.	0.	2.7	0.0
PSYCHOLOGISTS (TOTAL)	2760	1312	1395	733	757	579	638	923.	985.	8.	15.	0.9	1.5
SOCIAL SCIENTISTS (TOTAL)	2770	2675	2651	1607	1597	1068	1054	1972.	1966.	39.	22.	2.0	1.1
ECONOMISTS	2771	895	886	497	494	398	392	638.	640.	11.	7.	1.7	1.1
POLITICAL SCIENTISTS	2772	672	627	445	429	227	198	512.	500.	7.	8.	1.3	1.5
SOCIOLOGISTS	2773	799	787	462	469	337	318	582.	569.	12.	5.	2.1	0.9
OTHER SOCIAL SCIENTISTS	2774	309	351	203	205	106	146	240.	258.	9.	2.	3.7	0.9
TOTAL	2700	9439	9198	5994	5913	3445	3285	7256.	7158.	189.	148.	2.6	2.1

TABLE A1J

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	15061	14885	13426	13239	1635	1646
FIRST PROFESSIONAL	2220	552	534	239	190	313	344
MASTER'S	2230	10321	10007	6695	6659	3626	3348
BACHELOR'S OR THE EQUIVALENT	2240	1705	1541	874	771	831	770
TOTAL	2200	27639	26967	21234	20859	6405	6108

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	1247	1258	382	350	1226	1241	369	341	21	17	13	9
AERONAUTICAL & ASTRONAUTICAL	2611	132	113	32	24	130	111	29	23	2	2	3	1
CHEMICAL ENGINEERS	2612	25	30	13	11	24	30	13	11	1	0	0	0
CIVIL ENGINEERS	2613	237	232	44	55	231	226	44	55	6	6	0	0
ELECTRICAL ENGINEERS	2614	340	345	131	101	335	342	128	100	5	3	3	1
MECHANICAL ENGINEERS	2615	297	298	76	61	295	296	74	61	2	2	2	0
OTHER ENGINEERS	2616	216	240	86	98	211	236	81	91	5	4	5	7
PHYSICAL SCIENTISTS (TOTAL)	2620	3633	3616	685	639	3203	3207	491	457	430	409	194	182
ASTRONOMERS	2621	24	21	18	13	21	17	16	12	3	4	2	1
CHEMISTS	2622	2237	2240	430	401	1883	1903	273	250	354	337	157	151
PHYSICISTS	2623	1273	1278	212	203	1211	1216	185	180	62	62	27	23
OTHER PHYSICAL SCIENTISTS	2624	99	77	25	22	88	71	17	15	11	6	8	7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	560	556	145	155	522	522	117	126	38	34	28	29
ATMOSPHERIC SCIENTISTS	2631	14	19	13	10	14	19	13	10	0	0	0	0
EARTH SCIENTISTS	2632	433	441	110	131	406	413	86	103	27	28	24	28
OCEANOGRAPHERS	2633	39	39	4	5	35	39	3	4	4	0	1	1
OTHER ENVIRONMENTAL SCIENTISTS	2634	74	57	18	9	67	51	15	9	7	6	3	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	3583	3480	1294	1135	2908	2857	860	802	675	623	434	333
MATHEMATICIANS	2641	2948	2899	1014	874	2358	2347	622	565	590	552	392	309
COMPUTER SCIENTISTS	2642	635	581	280	261	550	510	238	237	85	71	42	24
LIFE SCIENTISTS (TOTAL)	2650	4113	3887	1136	998	2935	2857	719	653	1178	1030	417	345
AGRICULTURAL SCIENTISTS	2651	223	215	22	17	204	196	20	17	19	19	2	0
BIOLOGICAL SCIENTISTS	2652	3223	3174	702	661	2472	2440	395	392	751	734	307	269
MEDICAL SCIENTISTS	2653	373	281	342	262	199	161	280	218	174	120	62	44
OTHER LIFE SCIENTISTS	2654	294	217	70	58	60	60	24	26	234	157	46	32
PSYCHOLOGISTS (TOTAL)	2660	2398	2362	893	900	1798	1785	542	546	600	577	351	354
SOCIAL SCIENTISTS (TOTAL)	2670	5700	5700	1870	1931	4591	4606	1366	1419	1109	1094	504	512
ECONOMISTS	2671	1596	1557	530	526	1420	1398	464	460	176	159	66	66
POLITICAL SCIENTISTS	2672	1420	1428	347	332	1239	1241	274	270	181	187	73	62
SOCIOLOGISTS	2673	1820	1815	649	674	1304	1286	400	439	516	529	249	235
OTHER SOCIAL SCIENTISTS	2674	864	900	344	399	628	681	228	250	236	219	116	149
TOTAL	2600	21234	20859	6405	6108	17183	17075	4464	4344	4051	3784	1941	1764

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	1629	1608	1247	1258	382	350	1437.	1417.	40.	41.	2.8	2.9
AERONAUTICAL & ASTRONAUTICAL	2711	164	137	132	113	32	24	143.	120.	7.	7.	4.6	5.8
CHEMICAL ENGINEERS	2712	38	41	25	30	13	11	32.	37.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	281	287	237	232	44	55	257.	254.	5.	3.	2.0	1.1
ELECTRICAL ENGINEERS	2714	471	446	340	345	131	101	403.	392.	12.	15.	3.0	3.8
MECHANICAL ENGINEERS	2715	373	359	297	298	76	61	335.	323.	7.	7.	2.1	2.2
OTHER ENGINEERS	2716	302	338	216	240	86	98	266.	291.	9.	9.	3.4	3.1
PHYSICAL SCIENTISTS (TOTAL)	2720	4318	4255	3633	3616	685	639	3980.	3935.	127.	120.	3.2	3.0
ASTRONOMERS	2721	42	34	24	21	18	13	30.	25.	2.	2.	7.8	8.5
CHEMISTS	2722	2667	2641	2237	2240	430	401	2454.	2444.	77.	70.	3.2	2.9
PHYSICISTS	2723	1485	1481	1273	1278	212	203	1383.	1383.	45.	47.	3.2	3.4
OTHER PHYSICAL SCIENTISTS	2724	124	99	99	77	25	22	113.	84.	2.	1.	1.9	0.7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	705	711	560	556	145	155	639.	639.	29.	34.	4.5	5.4
ATMOSPHERIC SCIENTISTS	2731	27	29	14	19	13	10	20.	24.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	543	572	433	441	110	131	497.	512.	15.	21.	3.0	4.1
OCEANOGRAPHERS	2733	43	44	39	39	4	5	41.	43.	7.	6.	16.7	13.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	92	66	74	57	18	9	81.	60.	7.	8.	8.4	12.8
MATHEMATICAL SCIENTISTS (TOTAL)	2740	4877	4615	3583	3480	1294	1135	4214.	4018.	57.	49.	1.3	1.2
MATHEMATICIANS	2741	3962	3773	2948	2899	1014	874	3446.	3317.	43.	37.	1.3	1.1
COMPUTER SCIENTISTS	2742	915	842	635	581	280	261	768.	701.	13.	12.	1.7	1.7
LIFE SCIENTISTS (TOTAL)	2750	5249	4885	4113	3887	1136	998	4614.	4353.	164.	145.	3.6	3.3
AGRICULTURAL SCIENTISTS	2751	245	232	223	215	22	17	238.	227.	30.	28.	12.5	12.5
BIOLOGICAL SCIENTISTS	2752	3925	3835	3223	3174	702	661	3566.	3498.	128.	109.	3.6	3.1
MEDICAL SCIENTISTS	2753	715	543	373	281	342	262	491.	364.	2.	3.	0.4	0.8
OTHER LIFE SCIENTISTS	2754	364	275	294	217	70	58	319.	265.	5.	5.	1.5	1.7
PSYCHOLOGISTS (TOTAL)	2760	3291	3262	2398	2362	893	900	2793.	2766.	68.	60.	2.4	2.2
SOCIAL SCIENTISTS (TOTAL)	2770	7570	7631	5700	5700	1870	1931	6513.	6560.	87.	73.	1.3	1.1
ECONOMISTS	2771	2126	2083	1596	1557	530	526	1837.	1794.	28.	26.	1.5	1.5
POLITICAL SCIENTISTS	2772	1767	1760	1420	1428	347	332	1585.	1589.	18.	12.	1.1	0.8
SOCIOLOGISTS	2773	2469	2489	1820	1815	649	674	2101.	2098.	30.	30.	1.4	1.4
OTHER SOCIAL SCIENTISTS	2774	1208	1299	864	900	344	399	990.	1079.	12.	5.	1.2	0.4
TOTAL	2700	27639	26967	21234	20859	6405	6108	24190.	23688.	572.	522.	2.4	2.2

TABLE A1K

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PUBLIC BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	4264	4190	3953	3875	311	315
FIRST PROFESSIONAL	2220	117	175	77	37	40	138
MASTER'S	2230	3555	3539	2760	2838	795	701
BACHELOR'S OR THE EQUIVALENT	2240	516	503	308	292	208	211
TOTAL	2200	8452	8407	7098	7042	1354	1365

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	717	750	88	115	703	738	83	112	14	12	5	3
AERONAUTICAL & ASTRONAUTICAL	2611	84	79	16	12	83	78	13	11	1	1	3	1
CHEMICAL ENGINEERS	2612	6	9	2	1	6	9	2	1	0	0	0	0
CIVIL ENGINEERS	2613	133	138	15	27	128	133	15	27	5	5	0	0
ELECTRICAL ENGINEERS	2614	195	202	29	26	190	199	28	26	5	3	1	0
MECHANICAL ENGINEERS	2615	188	201	13	15	187	200	12	15	1	1	1	0
OTHER ENGINEERS	2616	111	121	13	34	109	119	13	32	2	2	0	2
PHYSICAL SCIENTISTS (TOTAL)	2620	1062	1047	129	126	983	973	95	95	79	74	34	31
ASTRONOMERS	2621	5	5	0	1	4	3	0	1	1	2	0	0
CHEMISTS	2622	594	596	89	80	530	539	62	58	64	57	27	22
PHYSICISTS	2623	421	413	33	37	411	401	28	31	10	12	5	6
OTHER PHYSICAL SCIENTISTS	2624	42	33	7	8	38	30	5	5	4	3	2	3
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	289	284	47	51	273	272	43	46	16	12	4	5
ATMOSPHERIC SCIENTISTS	2631	10	14	8	7	10	14	8	7	0	0	0	0
EARTH SCIENTISTS	2632	195	194	31	31	186	186	28	34	9	8	3	4
OCEANOGRAPHERS	2633	32	35	0	2	29	35	0	1	3	0	0	1
OTHER ENVIRONMENTAL SCIENTISTS	2634	52	41	8	4	48	37	7	4	4	4	1	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	1294	1305	315	288	1090	1108	220	215	204	197	95	73
MATHEMATICIANS	2641	1021	1047	274	232	838	871	183	163	183	176	91	69
COMPUTER SCIENTISTS	2642	273	258	41	56	252	237	37	52	21	21	4	4
LIFE SCIENTISTS (TOTAL)	2650	1268	1231	239	220	932	930	132	135	336	301	107	85
AGRICULTURAL SCIENTISTS	2651	154	149	2	6	139	134	2	6	15	15	0	0
BIOLOGICAL SCIENTISTS	2652	900	899	168	148	720	723	105	93	180	176	63	55
MEDICAL SCIENTISTS	2653	106	48	42	25	35	20	17	17	71	28	25	8
OTHER LIFE SCIENTISTS	2654	108	135	27	41	38	53	8	19	70	82	19	22
PSYCHOLOGISTS (TOTAL)	2660	729	698	143	150	554	530	91	95	175	168	52	55
SOCIAL SCIENTISTS (TOTAL)	2670	1739	1727	393	415	1434	1415	279	290	305	312	114	125
ECONOMISTS	2671	409	401	92	103	370	361	79	91	39	40	13	12
POLITICAL SCIENTISTS	2672	435	440	68	48	379	376	56	39	56	64	12	9
SOCIOLOGISTS	2673	513	492	117	117	392	372	69	72	121	120	48	45
OTHER SOCIAL SCIENTISTS	2674	382	394	116	147	293	306	75	88	89	88	41	59
TOTAL	2600	7098	7042	1354	1365	5969	5966	943	988	1129	1076	411	377

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	805	865	717	750	88	115	753.	794.	23.	22.	3.1	2.7
AERONAUTICAL & ASTRONAUTICAL	2711	100	91	84	79	16	12	89.	81.	7.	7.	7.4	8.5
CHEMICAL ENGINEERS	2712	8	10	6	9	2	1	7.	9.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	148	165	133	138	15	27	137.	147.	5.	3.	3.7	2.0
ELECTRICAL ENGINEERS	2714	224	228	195	202	29	26	212.	219.	4.	4.	2.0	2.0
MECHANICAL ENGINEERS	2715	201	216	188	201	13	15	192.	205.	5.	6.	2.8	2.8
OTHER ENGINEERS	2716	124	155	111	121	13	34	116.	133.	2.	2.	1.5	1.4
PHYSICAL SCIENTISTS (TOTAL)	2720	1191	1173	1062	1047	129	126	1130.	1104.	39.	26.	3.5	2.4
ASTRONOMERS	2721	5	6	5	5	0	1	5.	5.	0.	0.	0.0	0.0
CHEMISTS	2722	683	676	594	596	89	80	640.	633.	23.	15.	3.6	2.4
PHYSICISTS	2723	454	450	421	413	33	37	439.	432.	14.	11.	3.2	2.4
OTHER PHYSICAL SCIENTISTS	2724	49	41	42	33	7	8	46.	34.	2.	1.	4.6	1.7
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	336	335	289	284	47	51	307.	302.	15.	18.	4.7	5.9
ATMOSPHERIC SCIENTISTS	2731	18	21	10	14	8	7	13.	17.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	226	232	195	194	31	38	208.	206.	5.	8.	2.4	3.8
OCEANOGRAPHERS	2733	32	37	32	35	0	2	32.	36.	3.	3.	10.3	7.8
OTHER ENVIRONMENTAL SCIENTISTS	2734	60	45	52	41	8	4	54.	43.	6.	7.	11.5	16.7
MATHEMATICAL SCIENTISTS (TOTAL)	2740	1609	1593	1294	1305	315	288	1442.	1427.	31.	23.	2.1	1.6
MATHEMATICIANS	2741	1295	1279	1021	1047	274	232	1155.	1150.	22.	16.	1.9	1.4
COMPUTER SCIENTISTS	2742	314	314	273	258	41	56	287.	277.	8.	7.	2.9	2.6
LIFE SCIENTISTS (TOTAL)	2750	1507	1451	1268	1231	239	220	1380.	1334.	95.	88.	6.9	6.6
AGRICULTURAL SCIENTISTS	2751	156	155	154	149	2	6	156.	150.	30.	28.	19.1	18.9
BIOLOGICAL SCIENTISTS	2752	1068	1047	900	899	168	148	986.	978.	61.	55.	6.2	5.6
MEDICAL SCIENTISTS	2753	148	73	106	48	42	25	120.	60.	0.	0.	0.1	0.2
OTHER LIFE SCIENTISTS	2754	135	176	108	135	27	41	118.	146.	5.	5.	3.9	3.1
PSYCHOLOGISTS (TOTAL)	2760	872	848	729	698	143	150	795.	758.	36.	25.	4.6	3.2
SOCIAL SCIENTISTS (TOTAL)	2770	2132	2142	1739	1727	393	415	1896.	1897.	47.	39.	2.5	2.0
ECONOMISTS	2771	501	504	409	401	92	103	449.	444.	14.	12.	3.1	2.6
POLITICAL SCIENTISTS	2772	503	488	435	440	68	48	456.	459.	5.	7.	1.1	1.4
SOCIOLOGISTS	2773	630	609	513	492	117	117	562.	536.	22.	19.	3.9	3.6
OTHER SOCIAL SCIENTISTS	2774	498	541	382	394	116	147	428.	458.	6.	1.	1.4	0.3
TOTAL	2700	8452	8407	7098	7042	1354	1365	7703.	7616.	286.	240.	3.7	3.2

TABLE A1L

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PRIVATE BACHELOR'S GRANTING UNIVERSITIES AND COLLEGES
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	10797	10695	9473	9364	1324	1331
FIRST PROFESSIONAL	2220	435	359	162	153	273	206
MASTER'S	2230	6766	6468	3935	3821	2831	2647
BACHELOR'S OR THE EQUIVALENT	2240	1189	1038	566	479	623	559
TOTAL	2200	19187	18560	14136	13817	5051	4743

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	530	508	294	235	523	503	286	229	7	5	8	6
AERONAUTICAL & ASTRONAUTICAL	2611	48	34	16	12	47	33	16	12	1	1	0	0
CHEMICAL ENGINEERS	2612	19	21	11	10	18	21	11	10	1	0	0	0
CIVIL ENGINEERS	2613	104	94	29	28	103	93	29	28	1	1	0	0
ELECTRICAL ENGINEERS	2614	145	143	102	75	145	143	100	74	0	0	2	1
MECHANICAL ENGINEERS	2615	109	97	63	46	108	96	62	46	1	1	1	0
OTHER ENGINEERS	2616	105	119	73	64	102	117	68	59	3	2	5	5
PHYSICAL SCIENTISTS (TOTAL)	2620	2571	2569	556	513	2220	2234	396	362	351	335	160	151
ASTRONOMERS	2621	19	16	18	12	17	14	16	11	2	2	2	1
CHEMISTS	2622	1643	1644	341	321	1353	1364	211	192	290	280	130	129
PHYSICISTS	2623	852	865	179	166	800	815	157	149	52	50	22	17
OTHER PHYSICAL SCIENTISTS	2624	57	44	18	14	50	41	12	10	7	3	6	4
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	271	272	98	104	249	250	74	80	22	22	24	24
ATMOSPHERIC SCIENTISTS	2631	4	5	5	3	4	5	5	3	0	0	0	0
EARTH SCIENTISTS	2632	238	247	79	93	220	227	58	69	18	20	21	24
OCEANOGRAPHERS	2633	7	4	4	3	6	4	3	3	1	0	1	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	22	16	10	5	19	14	8	5	3	2	2	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	2289	2175	979	847	1818	1749	640	587	471	426	339	260
MATHEMATICIANS	2641	1927	1852	740	642	1520	1476	439	402	407	376	301	240
COMPUTER SCIENTISTS	2642	362	323	239	205	298	273	201	185	64	50	38	20
LIFE SCIENTISTS (TOTAL)	2650	2845	2656	897	778	2003	1927	587	518	842	729	310	260
AGRICULTURAL SCIENTISTS	2651	69	66	20	11	65	62	18	11	4	4	2	0
BIOLOGICAL SCIENTISTS	2652	2323	2275	534	513	1752	1717	290	299	571	558	244	214
MEDICAL SCIENTISTS	2653	267	233	300	237	164	141	263	201	103	92	37	36
OTHER LIFE SCIENTISTS	2654	186	82	43	17	22	7	16	7	164	75	27	10
PSYCHOLOGISTS (TOTAL)	2660	1669	1664	750	750	1244	1255	451	451	425	409	299	299
SOCIAL SCIENTISTS (TOTAL)	2670	3961	3973	1477	1516	3157	3191	1087	1129	804	782	390	387
ECONOMISTS	2671	1187	1156	438	423	1050	1037	385	369	137	119	53	54
POLITICAL SCIENTISTS	2672	985	988	279	284	860	865	218	231	125	123	61	53
SOCIOLOGISTS	2673	1307	1323	532	557	912	914	331	367	395	409	201	190
OTHER SOCIAL SCIENTISTS	2674	482	506	228	252	335	375	153	162	147	131	75	90
TOTAL	2600	14136	13817	5051	4743	11214	11109	3521	3356	2922	2708	1530	1387

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	824	743	530	508	294	235	684.	623.	17.	19.	2.5	3.1
AERONAUTICAL & ASTRONAUTICAL	2711	64	46	48	34	16	12	54.	39.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	30	31	19	21	11	10	25.	28.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	133	122	104	94	29	28	120.	107.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	247	218	145	143	102	75	192.	173.	8.	10.	4.1	6.0
MECHANICAL ENGINEERS	2715	172	143	109	97	63	46	144.	118.	2.	2.	1.1	1.3
OTHER ENGINEERS	2716	178	183	105	119	73	64	150.	158.	7.	7.	4.9	4.5
PHYSICAL SCIENTISTS (TOTAL)	2720	3127	3082	2571	2569	556	513	2850.	2831.	87.	93.	3.1	3.3
ASTRONOMERS	2721	37	28	19	16	18	12	25.	20.	2.	2.	9.3	10.7
CHEMISTS	2722	1984	1965	1643	1644	341	321	1814.	1811.	54.	55.	3.0	3.0
PHYSICISTS	2723	1031	1031	852	865	179	166	944.	951.	31.	36.	3.3	3.8
OTHER PHYSICAL SCIENTISTS	2724	75	58	57	44	18	14	68.	50.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	369	376	271	272	98	104	332.	336.	14.	17.	4.2	4.9
ATMOSPHERIC SCIENTISTS	2731	9	8	4	5	5	3	7.	7.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	317	340	238	247	79	93	289.	305.	10.	13.	3.4	4.3
OCEANOGRAPHERS	2733	11	7	7	4	4	3	9.	7.	4.	3.	38.8	40.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	32	21	22	16	10	5	26.	17.	1.	1.	1.9	2.9
MATHEMATICAL SCIENTISTS (TOTAL)	2740	3268	3022	2289	2175	979	847	2773.	2591.	26.	26.	0.9	1.0
MATHEMATICIANS	2741	2667	2494	1927	1852	740	642	2291.	2167.	21.	21.	0.9	1.0
COMPUTER SCIENTISTS	2742	601	528	362	323	239	205	481.	424.	5.	5.	1.0	1.1
LIFE SCIENTISTS (TOTAL)	2750	3742	3434	2845	2656	897	778	3233.	3020.	69.	57.	2.1	1.9
AGRICULTURAL SCIENTISTS	2751	89	77	69	66	20	11	82.	77.	0.	0.	0.0	0.0
BIOLOGICAL SCIENTISTS	2752	2857	2788	2323	2275	534	513	2579.	2519.	68.	54.	2.6	2.1
MEDICAL SCIENTISTS	2753	567	470	267	233	300	237	371.	304.	2.	3.	0.5	1.0
OTHER LIFE SCIENTISTS	2754	229	99	186	82	43	17	201.	119.	0.	0.	0.0	0.0
PSYCHOLOGISTS (TOTAL)	2760	2419	2414	1669	1664	750	750	1998.	2007.	32.	36.	1.6	1.8
SOCIAL SCIENTISTS (TOTAL)	2770	5438	5489	3961	3973	1477	1516	4617.	4663.	41.	34.	0.9	0.7
ECONOMISTS	2771	1625	1579	1187	1156	438	423	1388.	1349.	14.	15.	1.0	1.1
POLITICAL SCIENTISTS	2772	1264	1272	985	988	279	284	1129.	1131.	13.	6.	1.1	0.5
SOCIOLOGISTS	2773	1839	1880	1307	1323	532	557	1539.	1562.	8.	11.	0.5	0.7
OTHER SOCIAL SCIENTISTS	2774	710	758	482	506	228	252	562.	621.	6.	3.	1.0	0.6
TOTAL	2700	19187	18560	14136	13817	5051	4743	16487.	16071.	286.	281.	1.7	1.8

TABLE A1M

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
NONSCIENCE DEGREE-GRANTING AND TWO YEAR INSTITUTIONS
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	6924	6607	4875	4739	2049	1868
FIRST PROFESSIONAL	2220	681	508	311	262	370	246
MASTER'S	2230	30331	28542	18865	18528	11466	10014
BACHELOR'S OR THE EQUIVALENT	2240	7193	6435	3250	3003	3943	3432
TOTAL	2200	45129	42092	27301	26532	17828	15560

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	2909	2901	2151	1988	2847	2844	2112	1966	62	57	39	22
AERONAUTICAL & ASTRONAUTICAL	2611	58	63	39	54	54	60	37	50	4	3	2	4
CHEMICAL ENGINEERS	2612	60	62	33	31	58	61	32	31	2	1	1	0
CIVIL ENGINEERS	2613	536	507	373	357	526	496	370	351	10	11	3	6
ELECTRICAL ENGINEERS	2614	902	856	688	600	892	849	677	597	10	7	11	3
MECHANICAL ENGINEERS	2615	656	672	411	364	643	663	405	360	13	9	6	4
OTHER ENGINEERS	2616	697	741	607	582	674	715	591	577	23	26	16	5
PHYSICAL SCIENTISTS (TOTAL)	2620	3619	3602	1659	1481	3155	3144	1323	1160	464	458	336	321
ASTRONOMERS	2621	84	58	72	69	76	54	66	62	8	4	6	7
CHEMISTS	2622	2018	2020	944	838	1657	1657	675	589	361	363	269	249
PHYSICISTS	2623	1239	1248	485	430	1168	1171	454	405	71	77	31	25
OTHER PHYSICAL SCIENTISTS	2624	278	276	158	144	254	262	128	104	24	14	30	40
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	715	722	288	255	659	660	252	227	56	62	36	28
ATMOSPHERIC SCIENTISTS	2631	35	19	27	20	31	17	27	20	4	2	0	0
EARTH SCIENTISTS	2632	518	553	202	180	477	505	175	159	41	48	27	21
OCEANOGRAPHERS	2633	43	47	26	20	42	47	24	18	1	0	2	2
OTHER ENVIRONMENTAL SCIENTISTS	2634	119	103	33	35	109	91	26	30	10	12	7	5
MATHEMATICAL SCIENTISTS (TOTAL)	2640	5474	5253	5392	4340	4244	4082	3896	3101	1230	1171	1496	1239
MATHEMATICIANS	2641	4308	4217	3833	3212	3302	3244	2591	2124	1006	973	1242	1088
COMPUTER SCIENTISTS	2642	1166	1036	1559	1128	942	838	1305	977	224	198	254	151
LIFE SCIENTISTS (TOTAL)	2650	6823	6418	2692	2327	4227	4127	1574	1396	2600	2291	1118	931
AGRICULTURAL SCIENTISTS	2651	1048	998	398	390	997	950	327	313	51	48	71	77
BIOLOGICAL SCIENTISTS	2652	3775	3749	1403	1256	2782	2790	899	812	993	959	504	444
MEDICAL SCIENTISTS	2653	1241	1174	670	556	294	287	283	230	947	887	387	326
OTHER LIFE SCIENTISTS	2654	759	497	221	125	150	100	65	41	609	397	156	84
PSYCHOLOGISTS (TOTAL)	2660	2747	2705	2088	1972	1810	1765	1230	1151	937	940	858	821
SOCIAL SCIENTISTS (TOTAL)	2670	5014	4931	3558	3197	4031	3966	2722	2392	983	965	836	805
ECONOMISTS	2671	990	964	821	732	866	831	707	632	124	133	114	100
POLITICAL SCIENTISTS	2672	1176	1122	615	526	1017	983	516	436	159	139	99	90
SOCIOLOGISTS	2673	1513	1530	1143	1095	1103	1109	758	707	410	421	385	388
OTHER SOCIAL SCIENTISTS	2674	1335	1315	979	844	1045	1043	741	617	290	272	238	227
TOTAL	2600	27301	26532	17828	15560	20969	20588	13109	11393	6332	5944	4719	4167

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	5060	4889	2909	2901	2151	1988	3870.	3706.	4.	8.	0.1	0.2
AERONAUTICAL & ASTRONAUTICAL	2711	97	117	58	63	39	54	72.	87.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	93	93	60	62	33	31	73.	74.	1.	1.	0.8	0.9
CIVIL ENGINEERS	2713	909	864	536	507	373	357	706.	649.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	1590	1456	902	856	688	600	1215.	1114.	1.	2.	0.0	0.2
MECHANICAL ENGINEERS	2715	1067	1036	656	672	411	364	833.	823.	2.	4.	0.2	0.5
OTHER ENGINEERS	2716	1304	1323	697	741	607	582	971.	959.	1.	2.	0.1	0.2
PHYSICAL SCIENTISTS (TOTAL)	2720	5278	5083	3619	3602	1659	1481	4476.	4334.	26.	11.	0.6	0.3
ASTRONOMERS	2721	156	127	84	58	72	69	119.	86.	1.	1.	0.4	0.6
CHEMISTS	2722	2962	2858	2018	2020	944	838	2506.	2439.	19.	6.	0.8	0.3
PHYSICISTS	2723	1724	1678	1239	1248	485	430	1490.	1468.	7.	4.	0.4	0.3
OTHER PHYSICAL SCIENTISTS	2724	436	420	278	276	158	144	361.	342.	0.	0.	0.1	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	1003	977	715	722	288	255	885.	850.	2.	0.	0.2	0.0
ATMOSPHERIC SCIENTISTS	2731	62	39	35	19	27	20	48.	25.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	720	733	518	553	202	180	629.	655.	2.	0.	0.2	0.0
OCEANOGRAPHERS	2733	69	67	43	47	26	20	60.	58.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	152	138	119	103	33	35	148.	112.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	10866	9593	5474	5253	5392	4340	7889.	7117.	25.	19.	0.3	0.3
MATHEMATICIANS	2741	8141	7429	4308	4217	3833	3212	6059.	5618.	16.	11.	0.3	0.2
COMPUTER SCIENTISTS	2742	2725	2164	1166	1036	1559	1128	1830.	1499.	10.	8.	0.5	0.5
LIFE SCIENTISTS (TOTAL)	2750	9515	8745	6823	6418	2692	2327	8061.	7459.	49.	10.	0.6	0.1
AGRICULTURAL SCIENTISTS	2751	1446	1388	1048	998	398	390	1226.	1117.	2.	1.	0.1	0.0
BIOLOGICAL SCIENTISTS	2752	5178	5005	3775	3749	1403	1256	4504.	4368.	41.	10.	0.9	0.2
MEDICAL SCIENTISTS	2753	1911	1730	1241	1174	670	556	1495.	1428.	0.	0.	0.0	0.0
OTHER LIFE SCIENTISTS	2754	980	622	759	497	221	125	836.	546.	6.	0.	0.7	0.0
PSYCHOLOGISTS (TOTAL)	2760	4835	4677	2747	2705	2088	1972	3623.	3509.	6.	6.	0.2	0.2
SOCIAL SCIENTISTS (TOTAL)	2770	8572	8128	5014	4931	3558	3197	6605.	6241.	13.	6.	0.2	0.1
ECONOMISTS	2771	1811	1696	990	964	821	732	1352.	1266.	2.	1.	0.1	0.0
POLITICAL SCIENTISTS	2772	1791	1648	1176	1122	615	526	1465.	1358.	2.	1.	0.2	0.1
SOCIOLOGISTS	2773	2656	2625	1513	1530	1143	1095	2091.	2006.	5.	0.	0.2	0.0
OTHER SOCIAL SCIENTISTS	2774	2314	2159	1335	1315	979	844	1697.	1611.	4.	4.	0.3	0.2
TOTAL	2700	45129	42092	27301	26532	17828	15560	35409.	33216.	125.	60.	0.4	0.2

TABLE A1N

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PUBLIC NONSCIENCE DEGREE-GRANTING AND TWO YEAR INSTITUTIONS
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	6330	6058	4436	4331	1894	1727
FIRST PROFESSIONAL	2220	638	470	303	253	335	217
MASTER'S	2230	28546	26850	17847	17511	10699	9339
BACHELOR'S OR THE EQUIVALENT	2240	6896	6181	3102	2880	3794	3301
TOTAL	2200	42410	39559	25688	24975	16722	14584

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	2831	2830	2069	1924	2774	2777	2030	1902	57	53	39	22
AERONAUTICAL & ASTRONAUTICAL	2611	55	62	38	53	51	59	36	49	4	3	2	4
CHEMICAL ENGINEERS	2612	58	62	33	31	57	61	32	31	1	1	1	0
CIVIL ENGINEERS	2613	520	487	362	345	511	477	359	339	9	10	3	6
ELECTRICAL ENGINEERS	2614	880	843	662	581	871	837	651	578	9	6	11	3
MECHANICAL ENGINEERS	2615	632	648	377	342	620	640	371	338	12	8	6	4
OTHER ENGINEERS	2616	686	728	597	572	664	703	581	567	22	25	16	5
PHYSICAL SCIENTISTS (TOTAL)	2620	3376	3359	1537	1368	2951	2940	1240	1092	425	419	297	276
ASTRONOMERS	2621	78	54	70	66	73	51	64	59	5	3	6	7
CHEMISTS	2622	1872	1877	879	776	1540	1546	642	562	332	331	237	214
PHYSICISTS	2623	1166	1172	445	398	1098	1098	414	373	68	74	31	25
OTHER PHYSICAL SCIENTISTS	2624	260	256	143	128	240	245	120	98	20	11	23	30
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	682	690	277	246	629	631	245	221	53	59	32	25
ATMOSPHERIC SCIENTISTS	2631	33	19	27	20	30	17	27	20	3	2	0	0
EARTH SCIENTISTS	2632	492	525	191	171	451	478	168	153	41	47	23	18
OCEANOGRAPHERS	2633	43	47	26	20	42	47	24	18	1	0	2	2
OTHER ENVIRONMENTAL SCIENTISTS	2634	114	99	33	35	106	89	26	30	8	10	7	5
MATHEMATICAL SCIENTISTS (TOTAL)	2640	5172	4957	5091	4107	4019	3860	3671	2930	1153	1097	1420	1177
MATHEMATICIANS	2641	4054	3965	3623	3040	3118	3059	2446	2006	936	906	1177	1034
COMPUTER SCIENTISTS	2642	1118	992	1468	1067	901	801	1225	924	217	191	243	143
LIFE SCIENTISTS (TOTAL)	2650	6393	6023	2489	2145	3963	3880	1488	1317	2430	2143	1001	828
AGRICULTURAL SCIENTISTS	2651	1000	956	391	377	952	910	321	304	48	46	70	73
BIOLOGICAL SCIENTISTS	2652	3482	3458	1291	1156	2580	2594	836	751	902	864	455	405
MEDICAL SCIENTISTS	2653	1187	1132	608	502	285	280	270	221	902	852	338	281
OTHER LIFE SCIENTISTS	2654	724	477	199	110	146	96	61	41	578	381	138	69
PSYCHOLOGISTS (TOTAL)	2660	2563	2517	1950	1837	1698	1653	1143	1061	865	864	807	776
SOCIAL SCIENTISTS (TOTAL)	2670	4671	4599	3309	2957	3763	3709	2532	2219	908	890	777	738
ECONOMISTS	2671	890	869	740	665	779	751	634	573	111	118	106	92
POLITICAL SCIENTISTS	2672	1098	1043	567	480	951	915	471	392	147	128	96	88
SOCIOLOGISTS	2673	1400	1425	1071	1011	1027	1041	707	654	373	384	364	357
OTHER SOCIAL SCIENTISTS	2674	1283	1262	931	801	1006	1002	720	600	277	260	211	201
TOTAL	2600	25688	24975	16722	14584	19797	19450	12349	10742	5891	5525	4373	3842

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	4900	4754	2831	2830	2069	1924	3739.	3601.	4.	8.	0.1	0.2
AERONAUTICAL & ASTRONAUTICAL	2711	93	115	55	62	38	53	69.	86.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	91	93	58	62	33	31	71.	74.	1.	1.	0.9	0.9
CIVIL ENGINEERS	2713	882	832	520	487	362	345	684.	624.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	1542	1424	880	843	662	581	1170.	1085.	1.	2.	0.0	0.2
MECHANICAL ENGINEERS	2715	1009	990	632	648	377	342	789.	790.	2.	4.	0.2	0.5
OTHER ENGINEERS	2716	1283	1300	686	728	597	572	956.	942.	1.	2.	0.1	0.2
PHYSICAL SCIENTISTS (TOTAL)	2720	4913	4727	3376	3359	1537	1368	4151.	4020.	12.	9.	0.3	0.2
ASTRONOMERS	2721	148	120	78	54	70	66	111.	81.	1.	1.	0.5	0.6
CHEMISTS	2722	2751	2653	1872	1877	879	776	2318.	2258.	7.	5.	0.3	0.2
PHYSICISTS	2723	1611	1570	1166	1172	445	398	1389.	1370.	4.	3.	0.3	0.2
OTHER PHYSICAL SCIENTISTS	2724	403	384	260	256	143	128	333.	312.	0.	0.	0.1	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	959	936	682	690	277	246	842.	812.	2.	0.	0.2	0.0
ATMOSPHERIC SCIENTISTS	2731	60	39	33	19	27	20	46.	25.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	683	696	492	525	191	171	594.	621.	2.	0.	0.3	0.0
OCEANOGRAPHERS	2733	69	67	43	47	26	20	60.	58.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	147	134	114	99	33	35	143.	108.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	10263	9064	5172	4957	5091	4107	7397.	6693.	19.	18.	0.3	0.3
MATHEMATICIANS	2741	7677	7005	4054	3965	3623	3040	5678.	5268.	10.	10.	0.2	0.2
COMPUTER SCIENTISTS	2742	2586	2059	1118	992	1468	1067	1719.	1425.	10.	8.	0.6	0.6
LIFE SCIENTISTS (TOTAL)	2750	8882	8168	6393	6023	2489	2145	7525.	6979.	20.	8.	0.3	0.1
AGRICULTURAL SCIENTISTS	2751	1391	1333	1000	956	391	377	1173.	1072.	1.	0.	0.1	0.0
BIOLOGICAL SCIENTISTS	2752	4773	4614	3482	3458	1291	1156	4146.	4021.	13.	8.	0.3	0.2
MEDICAL SCIENTISTS	2753	1795	1634	1187	1132	608	502	1418.	1367.	0.	0.	0.0	0.0
OTHER LIFE SCIENTISTS	2754	923	587	724	477	199	110	789.	520.	6.	0.	0.7	0.0
PSYCHOLOGISTS (TOTAL)	2760	4513	4354	2563	2517	1950	1837	3371.	32[illegible].	6.	3.	0.2	0.1
SOCIAL SCIENTISTS (TOTAL)	2770	7980	7556	4671	4599	3309	2957	6105.	5768.	10.	5.	0.2	0.1
ECONOMISTS	2771	1630	1534	890	869	740	665	1203.	1135.	2.	1.	0.1	0.0
POLITICAL SCIENTISTS	2772	1665	1523	1098	1043	567	480	1354.	1255.	2.	1.	0.1	0.1
SOCIOLOGISTS	2773	2471	2436	1400	1425	1071	1011	1930.	1839.	2.	0.	0.1	0.0
OTHER SOCIAL SCIENTISTS	2774	2214	2063	1283	1262	931	801	1618.	1539.	4.	4.	0.3	0.2
TOTAL	2700	42410	39559	25688	24975	16722	14584	33132.	31132.	73.	51.	0.2	0.2

TABLE A10

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
PRIVATE NONSCIENCE DEGREE-GRANTING AND TWO YEAR INSTITUTIONS
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	594	549	439	408	155	141
FIRST PROFESSIONAL	2220	43	38	8	9	35	29
MASTER'S	2230	1785	1692	1018	1017	767	675
BACHELOR'S OR THE EQUIVALENT	2240	297	254	148	123	149	131
TOTAL	2200	2719	2533	1613	1557	1106	976

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	78	71	82	64	73	67	82	64	5	4	0	0
AERONAUTICAL & ASTRONAUTICAL	2611	3	1	1	1	3	1	1	1	0	0	0	0
CHEMICAL ENGINEERS	2612	2	0	0	0	1	0	0	0	1	0	0	0
CIVIL ENGINEERS	2613	16	20	11	12	15	19	11	12	1	1	0	0
ELECTRICAL ENGINEERS	2614	22	13	26	19	21	12	26	19	1	1	0	0
MECHANICAL ENGINEERS	2615	24	24	34	22	23	23	34	22	1	1	0	0
OTHER ENGINEERS	2616	11	13	10	10	10	12	10	10	1	1	0	0
PHYSICAL SCIENTISTS (TOTAL)	2620	243	243	122	113	204	204	83	68	39	39	39	45
ASTRONOMERS	2621	6	4	2	3	3	3	2	3	3	1	0	0
CHEMISTS	2622	146	143	65	62	117	111	33	27	29	32	32	35
PHYSICISTS	2623	73	76	40	32	70	73	40	32	3	3	0	0
OTHER PHYSICAL SCIENTISTS	2624	18	20	15	16	14	17	8	6	4	3	7	10
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	33	32	11	9	30	29	7	6	3	3	4	3
ATMOSPHERIC SCIENTISTS	2631	2	0	0	0	1	0	0	0	1	0	0	0
EARTH SCIENTISTS	2632	26	28	11	9	26	27	7	6	0	1	4	3
OCEANOGRAPHERS	2633	0	0	0	0	0	0	0	0	0	0	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	5	4	0	0	3	2	0	0	2	2	0	0
MATHEMATICAL SCIENTISTS (TOTAL)	2640	302	296	301	233	225	222	225	171	77	74	76	62
MATHEMATICIANS	2641	254	252	210	172	184	185	145	118	70	67	65	54
COMPUTER SCIENTISTS	2642	48	44	91	61	41	37	80	53	7	7	11	8
LIFE SCIENTISTS (TOTAL)	2650	430	395	203	182	260	247	86	79	170	148	117	103
AGRICULTURAL SCIENTISTS	2651	48	42	7	13	45	40	6	9	3	2	1	4
BIOLOGICAL SCIENTISTS	2652	293	291	112	100	202	196	63	61	91	95	49	39
MEDICAL SCIENTISTS	2653	54	42	62	54	9	7	14	9	45	35	49	45
OTHER LIFE SCIENTISTS	2654	35	20	22	15	4	4	4	0	31	16	18	15
PSYCHOLOGISTS (TOTAL)	2660	184	188	138	135	112	112	87	90	72	76	51	45
SOCIAL SCIENTISTS (TOTAL)	2670	343	332	249	240	268	257	190	173	75	75	59	67
ECONOMISTS	2671	100	95	81	67	87	80	73	59	13	15	8	8
POLITICAL SCIENTISTS	2672	78	79	48	46	66	68	45	44	12	11	3	2
SOCIOLOGISTS	2673	113	105	72	84	76	68	51	53	37	37	21	31
OTHER SOCIAL SCIENTISTS	2674	52	53	48	43	39	41	21	17	13	12	27	26
TOTAL	2600	1613	1557	1106	976	1172	1138	760	651	441	419	346	325

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	160	135	78	71	82	64	131.	105.	0.	0.	0.0	0.0
AERONAUTICAL & ASTRONAUTICAL	2711	4	2	3	1	1	1	3.	1.	0.	0.	0.0	0.0
CHEMICAL ENGINEERS	2712	2	0	2	0	0	0	2.	0.	0.	0.	0.0	0.0
CIVIL ENGINEERS	2713	27	32	16	20	11	12	22.	25.	0.	0.	0.0	0.0
ELECTRICAL ENGINEERS	2714	48	32	22	13	26	19	45.	29.	0.	0.	0.0	0.0
MECHANICAL ENGINEERS	2715	58	46	24	24	34	22	44.	33.	0.	0.	0.0	0.0
OTHER ENGINEERS	2716	21	23	11	13	10	10	15.	17.	0.	0.	0.0	0.0
PHYSICAL SCIENTISTS (TOTAL)	2720	365	356	243	243	122	113	324.	315.	14.	2.	4.3	0.8
ASTRONOMERS	2721	8	7	6	4	2	3	8.	6.	0.	0.	0.0	0.0
CHEMISTS	2722	211	205	146	143	65	62	188.	181.	12.	1.	6.1	0.8
PHYSICISTS	2723	113	108	73	76	40	32	101.	98.	3.	1.	2.5	1.0
OTHER PHYSICAL SCIENTISTS	2724	33	36	18	20	15	16	27.	30.	0.	0.	0.0	0.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	44	41	33	32	11	9	42.	38.	0.	0.	0.0	0.0
ATMOSPHERIC SCIENTISTS	2731	2	0	2	0	0	0	2.	0.	0.	0.	0.0	0.0
EARTH SCIENTISTS	2732	37	37	26	28	11	9	35.	34.	0.	0.	0.0	0.0
OCEANOGRAPHERS	2733	0	0	0	0	0	0	0.	0.	0.	0.	0.0	0.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	5	4	5	4	0	0	5.	4.	0.	0.	0.0	0.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	603	529	302	296	301	233	493.	424.	6.	1.	1.2	0.1
MATHEMATICIANS	2741	464	424	254	252	210	172	381.	350.	6.	1.	1.6	0.1
COMPUTER SCIENTISTS	2742	139	105	48	44	91	61	111.	74.	0.	0.	0.0	0.0
LIFE SCIENTISTS (TOTAL)	2750	633	577	430	395	203	182	535.	480.	28.	2.	5.2	0.5
AGRICULTURAL SCIENTISTS	2751	55	55	48	42	7	13	53.	45.	0.	1.	0.8	1.1
BIOLOGICAL SCIENTISTS	2752	405	391	293	291	112	100	359.	347.	28.	2.	7.7	0.5
MEDICAL SCIENTISTS	2753	116	96	54	42	62	54	77.	62.	0.	0.	0.0	0.0
OTHER LIFE SCIENTISTS	2754	57	35	35	20	22	15	47.	26.	0.	0.	0.0	0.0
PSYCHOLOGISTS (TOTAL)	2760	322	323	184	188	138	135	252.	249.	0.	3.	0.2	1.2
SOCIAL SCIENTISTS (TOTAL)	2770	592	572	343	332	249	240	500.	474.	3.	0.	0.6	0.1
ECONOMISTS	2771	181	162	100	95	81	67	149.	131.	0.	0.	0.0	0.0
POLITICAL SCIENTISTS	2772	126	125	78	79	48	46	110.	102.	0.	0.	0.3	0.4
SOCIOLOGISTS	2773	185	189	113	105	72	84	161.	168.	3.	0.	1.7	0.0
OTHER SOCIAL SCIENTISTS	2774	100	96	52	53	48	43	80.	73.	0.	0.	0.0	0.0
TOTAL	2700	2719	2533	1613	1557	1106	976	2277.	2084.	52.	9.	2.3	0.4

TABLE A1P

SURVEY OF SCIENTIFIC AND ENGINEERING EMPLOYMENT, JANUARY 1981
FEDERALLY FUNDED RESEARCH & DEVELOPMENT CENTERS
QUESTIONNAIRE SUMMARIES

SCIENTISTS AND ENGINEERS, JANUARY 1981 AND JANUARY 1980

ITEM 1. HIGHEST EARNED DEGREE		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980
DOCTOR'S	2210	6336	6722	6197	6609	139	113
FIRST PROFESSIONAL	2220	50	58	45	45	5	13
MASTER'S	2230	3693	3497	3553	3386	140	111
BACHELOR'S OR THE EQUIVALENT	2240	5217	4803	4998	4666	219	137
TOTAL	2200	15296	15080	14793	14706	503	374

ITEM 2. DISCIPLINES		TOTAL FULL TIME 1981	TOTAL FULL TIME 1980	TOTAL PART TIME 1981	TOTAL PART TIME 1980	MEN FULL TIME 1981	MEN FULL TIME 1980	MEN PART TIME 1981	MEN PART TIME 1980	WOMEN FULL TIME 1981	WOMEN FULL TIME 1980	WOMEN PART TIME 1981	WOMEN PART TIME 1980
ENGINEERS (TOTAL)	2610	6474	6469	135	46	6301	6306	109	44	173	163	26	2
AERONAUTICAL & ASTRONAUTICAL	2611	238	240	9	0	232	234	9	0	6	6	0	0
CHEMICAL ENGINEERS	2612	290	272	7	4	273	258	6	4	17	14	1	0
CIVIL ENGINEERS	2613	224	206	3	5	219	202	2	4	5	4	1	1
ELECTRICAL ENGINEERS	2614	2262	2210	39	19	2217	2169	38	19	45	41	1	0
MECHANICAL ENGINEERS	2615	1551	1580	39	6	1529	1557	37	6	22	23	2	0
OTHER ENGINEERS	2616	1909	1961	38	12	1831	1886	17	11	78	75	21	1
PHYSICAL SCIENTISTS (TOTAL)	2620	5331	5453	181	167	5062	5195	137	122	269	258	44	45
ASTRONOMERS	2621	150	148	1	4	141	139	1	4	9	9	0	0
CHEMISTS	2622	1375	1402	48	52	1253	1286	20	21	122	116	28	31
PHYSICISTS	2623	3383	3370	120	93	3265	3262	106	81	118	108	14	12
OTHER PHYSICAL SCIENTISTS	2624	423	533	12	18	403	508	10	16	20	25	2	2
ENVIRONMENTAL SCIENTISTS (TOTAL)	2630	818	676	35	33	726	601	22	22	92	75	13	11
ATMOSPHERIC SCIENTISTS	2631	207	100	10	1	191	98	5	0	16	2	5	1
EARTH SCIENTISTS	2632	278	273	19	21	249	244	15	15	29	29	4	6
OCEANOGRAPHERS	2633	25	16	1	0	22	15	1	0	3	1	0	0
OTHER ENVIRONMENTAL SCIENTISTS	2634	308	287	5	11	264	244	1	7	44	43	4	4
MATHEMATICAL SCIENTISTS (TOTAL)	2640	1342	1315	102	68	1065	1065	59	34	277	250	43	34
MATHEMATICIANS	2641	667	658	35	20	542	536	22	10	125	122	13	10
COMPUTER SCIENTISTS	2642	675	657	67	48	523	529	37	24	152	128	30	24
LIFE SCIENTISTS (TOTAL)	2650	713	675	41	52	512	482	14	27	201	193	27	25
AGRICULTURAL SCIENTISTS	2651	5	1	0	0	5	0	0	0	0	1	0	0
BIOLOGICAL SCIENTISTS	2652	495	468	28	30	345	329	9	17	150	139	19	13
MEDICAL SCIENTISTS	2653	65	79	5	15	56	68	4	10	9	11	1	5
OTHER LIFE SCIENTISTS	2654	148	127	8	7	106	85	1	0	42	42	7	7
PSYCHOLOGISTS (TOTAL)	2660	8	5	1	0	6	5	0	0	2	0	1	0
SOCIAL SCIENTISTS (TOTAL)	2670	107	113	8	8	93	105	4	4	14	8	4	4
ECONOMISTS	2671	69	79	4	4	63	75	3	4	6	4	1	0
POLITICAL SCIENTISTS	2672	14	13	0	0	13	12	0	0	1	1	0	0
SOCIOLOGISTS	2673	4	1	1	0	2	0	0	0	2	1	1	0
OTHER SOCIAL SCIENTISTS	2674	20	20	3	4	15	18	1	0	5	2	2	4
TOTAL	2600	14793	14706	503	374	13765	13759	345	253	1028	947	158	121

ITEM 3. DISCIPLINES		TOTAL 1981	TOTAL 1980	FULL TIME 1981	FULL TIME 1980	PART TIME 1981	PART TIME 1980	TOTAL FTE'S 1981	TOTAL FTE'S 1980	FTE'S DEVOTED TO R&D 1981	FTE'S DEVOTED TO R&D 1980	% TOTAL FTE'S DEVOTED TO R&D 1981	% TOTAL FTE'S DEVOTED TO R&D 1980
ENGINEERS (TOTAL)	2710	6609	6515	6474	6469	135	46	6556.	6474.	6552.	6470.	99.9	99.9
AERONAUTICAL & ASTRONAUTICAL	2711	247	240	238	240	9	0	247.	240.	247.	240.	100.0	100.0
CHEMICAL ENGINEERS	2712	297	276	290	272	7	4	290.	272.	290.	272.	100.0	100.0
CIVIL ENGINEERS	2713	227	211	224	206	3	5	226.	207.	226.	207.	100.0	100.0
ELECTRICAL ENGINEERS	2714	2301	2229	2262	2210	39	19	2285.	2217.	2285.	2217.	100.0	100.0
MECHANICAL ENGINEERS	2715	1590	1586	1551	1580	39	6	1574.	1578.	1572.	1576.	99.9	99.9
OTHER ENGINEERS	2716	1947	1973	1909	1961	38	12	1934.	1960.	1932.	1958.	99.9	99.9
PHYSICAL SCIENTISTS (TOTAL)	2720	5512	5620	5331	5453	181	167	5401.	5484.	5398.	5484.	99.9	100.0
ASTRONOMERS	2721	151	152	150	148	1	4	151.	150.	151.	150.	100.0	100.0
CHEMISTS	2722	1423	1454	1375	1402	48	52	1383.	1398.	1381.	1398.	99.9	100.0
PHYSICISTS	2723	3503	3463	3383	3370	120	93	3435.	3395.	3433.	3395.	100.0	100.0
OTHER PHYSICAL SCIENTISTS	2724	435	551	423	533	12	18	433.	542.	433.	542.	100.0	100.0
ENVIRONMENTAL SCIENTISTS (TOTAL)	2730	853	709	818	676	35	33	838.	692.	836.	692.	99.8	100.0
ATMOSPHERIC SCIENTISTS	2731	217	101	207	100	10	1	214.	101.	214.	101.	100.0	100.0
EARTH SCIENTISTS	2732	297	294	278	273	19	21	288.	282.	287.	282.	99.7	100.0
OCEANOGRAPHERS	2733	26	16	25	16	1	0	25.	15.	25.	15.	100.0	100.0
OTHER ENVIRONMENTAL SCIENTISTS	2734	313	298	308	287	5	11	311.	294.	310.	294.	99.7	100.0
MATHEMATICAL SCIENTISTS (TOTAL)	2740	1444	1383	1342	1315	102	68	1392.	1334.	1387.	1330.	99.6	99.7
MATHEMATICIANS	2741	702	678	667	658	35	20	688.	659.	687.	659.	99.9	100.0
COMPUTER SCIENTISTS	2742	742	705	675	657	67	48	704.	676.	700.	672.	99.4	99.4
LIFE SCIENTISTS (TOTAL)	2750	754	727	713	675	41	52	727.	694.	721.	694.	99.2	100.0
AGRICULTURAL SCIENTISTS	2751	5	1	5	1	0	0	5.	1.	5.	1.	100.0	100.0
BIOLOGICAL SCIENTISTS	2752	523	498	495	468	28	30	501.	475.	495.	475.	98.8	100.0
MEDICAL SCIENTISTS	2753	70	94	65	79	5	15	67.	86.	67.	86.	100.0	100.0
OTHER LIFE SCIENTISTS	2754	156	134	148	127	8	7	154.	132.	154.	132.	100.0	100.0
PSYCHOLOGISTS (TOTAL)	2760	9	5	8	5	1	0	9.	5.	6.	4.	64.7	80.0
SOCIAL SCIENTISTS (TOTAL)	2770	115	121	107	113	8	8	111.	118.	90.	118.	81.1	100.0
ECONOMISTS	2771	73	83	69	79	4	4	71.	82.	56.	82.	78.9	100.0
POLITICAL SCIENTISTS	2772	14	13	14	13	0	0	14.	13.	12.	13.	85.7	100.0
SOCIOLOGISTS	2773	5	1	4	1	1	0	5.	1.	3.	1.	66.7	100.0
OTHER SOCIAL SCIENTISTS	2774	23	24	20	20	3	4	22.	22.	19.	22.	88.4	100.0
TOTAL	2700	15296	15080	14793	14706	503	374	15033.	14802.	14989.	14793.	99.7	99.9

section d

university-administered ffrdc's: january 1981

department of defense

Center for Naval Analyses (University of Rochester).

Lincoln Laboratory (Massachusetts Institute of Technology).

department of energy

Ames Laboratory (Iowa State University of Science and Technology).

Argonne National Laboratory (University of Chicago and Argonne Universities Association).

Brookhaven National Laboratory (Associated Universities, Inc.).

E. O. Lawrence Berkeley Laboratory (University of California).

E. O. Lawrence Livermore Laboratory (University of California).

Los Alamos Scientific Laboratory (University of California).

Fermi National Accelerator Laboratory (Universities Research Association).

Oak Ridge Institute of Nuclear Studies (Oak Ridge Associated Universities).

Plasma Physics Laboratory (Princeton University).

Stanford Linear Accelerator Center (Stanford University).

national aeronautics and space administration

Jet Propulsion Laboratory (California Institute of Technology).

national science foundation

Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.).

National Astronomy and Ionosphere Center (Cornell University).

Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.).

National Center for Atmospheric Research (University Corporation for Atmospheric Research).

National Radio Astronomy Observatory (Associated Universities, Inc).

Sacramento Peak Observatory (Association of Universities for Research in Astronomy, Inc.).

section e

reproduction of survey instruments

Covering Letter 80
Survey Questionnaire 83
Survey Instructions and Definitions 88

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Dear Respondent:

Enclosed is the January 1981 Survey of Scientific and Engineering Personnel Employed at Universities and Colleges, NSF Form 724. Your cooperation in providing a timely response to this survey will be appreciated and will be critical to the overall success of the National Science Foundation's efforts to provide science and engineering (S/E) personnel statistics to Federal and academic analysts. As you know, these data serve as indicators of the changes in the supply and utilization of S/E personnel in all sectors of the economy in the United States.

Three recent examples of data use follow: (1) Data from this survey were combined with statistics from two other NSF surveys of academic R&D expenditures and graduate science enrollment and support in a new biennial series, Academic Science, 1972-77 (NSF 80-313), which analyzed the complex allocation of science and engineering resources in academe; (2) data on FTE-measured R&D activities were also combined with personnel statistics from industrial and Federal research sectors in National Patterns of Science and Technology Resources (NSF 80-308) which includes a review of national S/E employment trends; and (3) these data were also incorporated into the report, Employment Patterns of Academic Scientists and Engineers: 1973-78 (NSF 80-314), which addressed the factors behind academic S/E personnel growth during the midseventies. In addition, a large number of data requests for institutional profiles are received by NSF from university officials for use in studies of peer institutions.

The January 1981 personnel survey form generally corresponds to the 1980 questionnaire. You may recall that NSF shifted to a biennial cycle for conducting all of its higher education surveys, with an abbreviated or short-form questionnaire used in alternate years to collect only key data elements. The experience of conducting the long- and short-form surveys, however, has shown that little, if any, reduction in the reporting burden occurred. In fact, most respondents indicated their preference for consistency in questionnaire format, survey population, and design. Therefore, NSF will return to an annual full-scale survey

cycle using a consistent form each year. Because such advice from respondents has been beneficial in past decisions regarding the survey process, NSF welcomes any further comments and recommendations about additional improvements.

Several minor changes in the instructions and format of the survey appear in this year's form in an attempt to achieve greater conformity between this survey's questionnaire and survey requests from other Federal agencies. It is hoped that these modifications will assist you in tailoring your records to meet multiple requests. If substantive increases in your workload do occur, however, as a result of any of these changes, please use the Remarks section on the questionnaire to keep us informed.

The changes to the January 1981 form include the following:

- In item 1, NSF will no longer collect data separately on professionals in science and engineering that hold Doctorates of Education; they are to be merged with all doctorate degree-holders in line (a). In addition, several of the titles of the degree classifications have been reworded to conform to standard postsecondary student terminology.

- In item 3, NSF has reclassified columns 1, 2, and 3 as "optional," since they repeat the information collected in items 1 and 2. They may be useful to your institution, however, in computing FTE data requested in columns 4 and 5, but they are not required by NSF. In addition, during telephone followups, we have found these columns to be helpful for reconciliation of both headcount and FTE data.

- Detailed survey subfields have been alphabetized.

- The survey instructions have been reworded in several areas to reflect the changes on the questionnaire described above. For example, NSF wants to provide you with the legislative basis for this survey:

  "Authority for the collection of this information is established under the National Science Foundation Act of 1950, P.L. 507 (42 U.S.C. subsection 1862), Section 3(a)(6); which directs NSF "... to maintain a current register of scientific and technical personnel, and in other ways to provide a central clearinghouse for the collection,

interpretation, and analysis of data on the availability of, and the current and projected need for, scientific and technological resources in the United States, and to provide a source of information for policy formulation by other agencies of the Federal Government."

Included in the package is a postcard that should be returned immediately upon receipt. It will assure us that the questionnaire has reached you and will provide the names of persons to be contacted if questions arise in the followup and editing phases of the survey. Please complete and return the questionnaire to us by April 21, 1981.

Again, thank you in advance for your continued efforts in preparing timely and meaningful responses to this survey. Should you have any questions, please call Mr. James Hoehn or Mrs. Esther Gist on Area Code 202-634-4673.

Sincerely yours,

Penny D. Foster

Penny D. Foster, Acting Study Director
Universities and Nonprofit
Institutions Studies Group
Division of Science Resources Studies

Enclosures

Form Approved
FEDAC No. R 109
App. Exp. 12/82

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING PERSONNEL EMPLOYED AT UNIVERSITIES AND COLLEGES, JANUARY 1981

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W. Room L-602
Washington, D.C. 20550 Attn: UNISG

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended in P.L. 507 (42 U.S.C. 1862) (Section 3(a) (6), and Executive Order 10521 (March 17, 1954). Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

Please correct if name or address has changed

This survey requests scientific and engineering employment data according to institutional recordkeeping conventions. **The completed 1981 questionnaire should be returned by April 20, 1981.** Your prompt cooperation will be appreciated. If you determine, however, that you cannot respond by April 20, notify NSF and request an extension of time.

Please read the enclosed instructions before completing this form. If you have any questions, contact Mr. James Hoehn or Ms. Esther Gist (202—634-4673). Please complete all columns; estimates by academic officials will be better than NSF estimates.

All entries should be in whole numbers; please do not enter decimals or fractions, except in item 3, columns 4 and 5 where two decimal places are optional.

SURVEY POPULATION

Include data for all organizational units of your institution that employ scientists and engineers, such as regional campuses, computer centers, medical schools, or agricultural experiment stations and associated research units. Also include any hospital or clinic owned, operated, or controlled by your university and integrated operationally with the clinical programs of your medical schools.

Federally Funded Research and Development Centers (FFRDC's)

Separate forms have been mailed directly to all FFRDC's administered by academic institutions. A list of these centers appears on page 3 of the Instructions and Definitions.

INSTITUTIONAL CLASSIFICATION

Highest degree granted in the sciences or engineering during 1980-81	Check one	One example of a science or engineering field in which highest degree was awarded	Check primary administrative control of your institution	
Doctor's degree, e.g. Ph.D, D. Eng., or D.E.S.	☐	_____	Federal	☐
First professional degree, e.g., M.D., D.D.S., D.V.M., etc. . . .	☐	_____	Local	☐
Master's degree	☐	_____		
Bachelor's degree	☐	_____	State	☐
Associate or other 2-year award . .	☐	_____		
No degree granted in the sciences or engineering	☐	_____	Private	☐

Item 1.	Number of scientists and engineers by highest earned degree and employment status: January 1981				
	HIGHEST EARNED DEGREE		TOTAL (1)	FULL TIME (2)	PART TIME (3)
	a. Doctor's degree, e.g., Ph.D., D. Eng., or D.E.S.	*2210*			
	b. First professional degree, e.g., M.D., D.D.S., D.V.M., etc.	*2220*			
	c. Master's degree	*2230*			
	d. Bachelor's degree or the equivalent	*2240*			
	e. Total (sum of a through d)	*2200*			

NOTE: To ensure proper data comparability between item 1, line e, and items 2 and 3 (if used):

a) col. 1 should equal item 3, line h, col. 1;
b) col. 2 should equal item 2, line h, col. 1 and item 3, line h, col. 2;
c) col. 3 should equal item 2, line h, col. 2 and item 3, line h, col. 3.

Item 2.

Number of scientists and engineers by sex, employment status, and field: January 1981

DISCIPLINES		TOTAL		MEN		WOMEN	
		Full time	Part time	Full time	Part time	Full time	Part time
		(1)	(2)	(3)	(4)	(5)	(6)
a. Engineers (total)	2610						
(1) Aeronautical & astronautical engineers	2611						
(2) Chemical engineers	2612						
(3) Civil engineers	2613						
(4) Electrical engineers	2614						
(5) Mechanical engineers	2615						
(6) Other engineers	2616						
b. Physical scientists (total)	2620						
(1) Astronomers	2621						
(2) Chemists	2622						
(3) Physicists	2623						
(4) Other physical scientists	2624						
c. Environmental scientists (total)	2630						
(1) Atmospheric scientists	2631						
(2) Earth scientists	2632						
(3) Oceanographers	2633						
(4) Other environmental scientists	2634						
d. Mathematical & computer scientists (total)	2640						
(1) Mathematicians (exclude computer scientists)	2641						
(2) Computer scientists (exclude programmers)	2642						
e. Life scientists (total)	2650						
(1) Agricultural scientists	2651						
(2) Biological scientists	2652						
(3) Medical scientists (see instructions, p. 2)	2653						
(4) Other life scientists	2654						
f. Psychologists (total)	2660						
g. Social scientists (total) (exclude historians)	2670						
(1) Economists	2671						
(2) Political scientists	2672						
(3) Sociologists	2673						
(4) Other social scientists	2674						
h. Total (sum of a thru g)	2600						

PLEASE EXCLUDE from your response any employees in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

Item 3.	January 1981		Headcounts			Estimated full-time-equivalents (FTE)		
	DISCIPLINES		OPTIONAL (For your convenience in calculating column 4)			Total FTE's (Include all activities e.g., teaching, separately budgeted R&D[1] etc., of all individuals reported in col. 1)	FTE's devoted to separately budgeted R&D[1]	
			Total	Full time	Part time		Number	Percent (optional)[2]
			(1)	(2)	(3)	(4)	(5)	(6)
	a. Engineers (total)	2710						
	(1) Aeronautical & astronautical engineers	2711						%
	(2) Chemical engineers	2712						%
	(3) Civil engineers	2713						%
	(4) Electrical engineers	2714						%
	(5) Mechanical engineers	2715						%
	(6) Other engineers	2716						%
	b. Physical scientists (total)	2720						
	(1) Astronomers	2721						%
	(2) Chemists	2722						%
	(3) Physicists	2723						%
	(4) Other physical scientists	2724						%
	c. Environmental scientists (total)	2730						
	(1) Atmospheric scientists	2731						%
	(2) Earth scientists	2732						%
	(3) Oceanographers	2733						%
	(4) Other environmental scientists	2734						%
	d. Mathematical & computer scientists (total)	2740						
	(1) Mathematicians (exclude computer scientists)	2741						%
	(2) Computer scientists (exclude programmers)	2742						%
	e. Life scientists (total)	2750						
	(1) Agricultural scientists	2751						%
	(2) Biological scientists	2752						%
	(3) Medical scientists (see instructions, p. 2)	2753						%
	(4) Other life scientists	2754						%
	f. Psychologists (total)	2760						%
	g. Social scientists (total) (exclude historians)	2770						
	(1) Economists	2771						%
	(2) Political scientists	2772						%
	(3) Sociologists	2773						%
	(4) Other social scientists	2774						%
	h. Total (sum of a thru g)	2700						

[1] See section 10 under Survey Instructions for definition of "separately budgeted R&D expenditures."

[2] Column 6 has been provided for the convenience of those institutions which estimate the number (Column 5) of FTE's devoted to separately budgeted R&D activities by use of a percentage (Column 6) in each discipline.

CHECK LIST

( ) 1. Are all entries rounded to whole numbers? Please do not enter fractions or decimals, except in columns 4 and 5 where two decimal places are optional.

( ) 2. Do the data add to subtotals?

( ) 3. Are all columns completed? YOUR estimates will be better than OURS. An explanation of estimates may be noted on a separate sheet or in the REMARKS.

( ) 4. Are all branches and components such as medical school, computer center, and agricultural experiment station included?

( ) 5. Have you included all postdoctorals?

( ) 6. Have you excluded graduate students?

1980-81 DATA CHECK

(For your convenience)

Please compare your January 1980 personnel data with your survey response for January 1981, particularly for the totals. Please explain below or on a separate sheet any significant changes; and, where possible, indicate any required adjustments in data reported in previous surveys.

	1980	1981
Total full-time scientists & engineers	Line 2700, col 2.	Line 2700, col 2.
Total part-time scientists & engineers	Line 2700, col 3.	Line 2700, col 3.
Total FTE's	Line 2700, col 4.	Line 2700, col 4.

CONFIDENTIALITY

The National Science Foundation recognizes that its ability to gather much of the enclosed information would be severely impaired if it could not be held in confidence. Please indicate below the number of any items which would not be supplied but for assurance that the source will be held in confidence. The Foundation will hold in confidence such information to the extent permitted by law.

ITEM:

REMARKS

What methods and source records were used for estimating R&D effort?

Please indicate problems encountered in estimating R&D-related activity.

What month did the data come from that were used to complete this survey?

Are there any significant changes in data reported in previous surveys?

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH	NO.	EXT
NAME OF PERSON WHO PREPARED THIS SUBMISSION (If different from above)	TITLE	AREA CODE	EXCH	NO.	EXT

NAME OF INSTITUTION	DATE	ADDRESS (number, street, city, State, ZIP code)

NSF FORM 724 (2-81)

Form Approved
FEDAC No. R109
Approval Expires December 1982

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING PERSONNEL EMPLOYED AT UNIVERSITIES AND COLLEGES JANUARY 1981 INSTRUCTIONS AND DEFINITIONS

Introduction

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended in P.L. 507 (42 U.S.C. 1862) (Section 3(a) (6), and Executive Order 10521 (March 17, 1954). Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

The National Science Foundation requests your cooperation in completing the attached questionnaire covering the personnel characteristics of your institution as they relate to the sciences and engineering. This form requests employment data in 1980 according to institutional recordkeeping coventions. The questionnaire should be completed and returned to NSF by **April 20, 1981.** If you determine, however, that you will not be able to respond by that date, please notify NSF and request an extension of time.

Where data reported in the current survey differ significantly from those reported in the previous survey, please indicate the reasons for the difference, such as "opening of new medical school," etc., at the end of the questionnaire in the "Remarks" section, or on a separate sheet of paper.

The survey procedures are outlined in flow chart format. (See pp. 5-8.)

If you have any questions regarding information requested on this form, write or telephone Mr. James Hoehn or Ms. Esther Gist at the Universities and Nonprofit Institutions Studies Group, Division of Science Resources Studies, National Science Foundation, 1800 G Street, N.W., Room L-602, Washington, D.C. 20550 (Telephone: (202) 634-4673.) Additional forms, as well as copies of previous responses, may be obtained by writing to the above address.

Survey Instructions

1. Survey Population

This survey, conducted annually, covers professional employment at all academic institutions with a science or engineering (S/E) program. The institutional response to this survey should reflect personnel activity in all branches and other units of the parent institution, including regional campuses, computer centers, medical schools, or agricultural experiment stations and associated research units. If any data for any of these campuses are not included in your response to NSF, please indicate this under "Remarks" when submitting your questionnaire.

Federally funded research and development centers (FFRDC's) are to report their data separately from the administering university; see the listing of FFRDC's administered by academic institutions (p. 3.)

2. Survey Time Period

The January data referenced in this questionnaire is the time when this survey is conducted rather than the actual reporting date of data compiled for NSF. For institutions reporting on the basis of central record systems, data should reflect the date when your files are "frozen" for annual personnel reports. Many institutions, especially those with State affiliation, use their central records compiled in the preceding fall of each year to report to NSF. Please indicate the reporting date of data for your institution in the space provided on the back of the questionnaire.

3. Professional Employment

The term "professional," for purposes of this survey, refers to all persons paid a salary or stipend by the responding institution who work at a level at which the knowledge acquired by academic training equal to a bachelor's degree in science or engineering is essential in the performance of duties. Many institutions with central reporting systems use headcounts of *exempt* employees, i.e., those employees who are in the exempt category of the Fair Labor Standards Act as amended. Exempt employees are not eligible for overtime payment. Others use EE06 concepts.

Include: S/E personnel with faculty status postdoctorates,[1] and other professional employees such as systems analysts in computer centers.

Exclude: (1) Personnel on sabbatical or other leave status even if these personnel continue to be paid by your institution; (2) personnel employed in branches of your institution located in foreign countries; (3) unpaid voluntary staff; (4) person "unpaid" by the university but paid by the medical school; (5) student health service personnel; (6) those agricultural extension personnel primarily involved in home economics and 4-H youth programs; (7) administrative officers above the level of department chairpersons with titles such as president, academic dean, dean of faculty, provost, chancellor, etc., even though they may devote part of their time to teaching and/or research; (8) all graduate students.

4. Assignment of Scientists and Engineers to NSF Disciplines

Determination of whether professional employees should be reported in the NSF personnel survey as "scientists and engineers" and their associated disciplines is done by most respondents on the basis of departmental structures. After particular departments are selected for inclusion in the NSF personnel survey, respondents usually classify headcounts of all professional employees into various S/E disciplines according to their primary or home department of assignment. Where individual assignments are split into two departments on a 50-percent basis, classification into a single NSF discipline should be made according to institutional conventions.

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[1]Some institutions without comprehensive central records on the number of postdoctorates base their response to this survey on data gathered in the office of the graduate dean as part of NSF's Survey of Graduate Science Students and Postdoctorates.

See classification of disciplines of employment in the sciences and engineering for the broad and detailed S/E disciplines of employment corresponding to the shown on the questionnaire, with illustrative categories of each discipline (p. 4.) Please note that education, law, humanities, music, the arts, physical education, and library science are not considered S/E disciplines for the purpose of this survey. This discipline-oriented taxonomy is used by institutions that compile their own departmental groupings for this NSF survey. While most respondents report S/E headcounts based on departmental structures, NSF recognizes that because of the multidisciplinary nature of many academic activities, degree specialties and departmental assignments may differ (e.g., a Ph.D. in mechanical engineering may be assigned to the department of orthopedics.) To promote ease of reporting and consistency of data among institutions it is suggested that where these differences are not significant, all professionals in a department be assigned to a single discipline. In other instances, where sizable differences occur, institutional respondents may choose to report professionals employed in a single department into two or more disciplines for the NSF personnel report. For example, an institution may have a single department of electrical engineering and computer science and report individuals into two separate disciplines on the NSF personnel survey according to their degree specialities.

It is important that respondents *include* in the survey scientists and engineers who are appointed to organizational units that are not part of *any* academic department. For example, scientists and engineers employed at a computer center that is not affiliated with a particular academic department should be *included* in the survey. In similar manner an economist in a nonscience department should be reported. The most prevalent reporting practice for these nonacademic units is to assign groups of individuals to NSF disciplines according to their degree specialties, especially when multidisciplinary activities are prominent.

5. Medical and Clinical Disciplines

For purposes of this survey, all M.D.'s, D.D.S.'s, etc., *with faculty or academic appointments* are to be reported, including postdoctorates. NSF considers faculty status given to physicians, dentists, public health specialists, pharmacists, etc., to be an indicator of significant involvement in teaching, clinical investigation, or other R&D activities.

Exclude: (1) All medical practitioners, such as nurse anesthetists, occupational therapists, physical therapists, interns; (2) scientists whose primary employment is at independent hospitals even though they may perform some teaching or research functions for your institution through cooperative agreements; (3) unpaid voluntary staff at medical or dental schools; and, (4) medical residents unless research training under the supervision of a senior mentor is the prime purpose of the appointment.

6. Headcounts of Full-time Scientists and Engineers

Full-time employees are those individuals available for full-time assignments at the date used for reporting in this survey, or those who are designated as "full time" in an official contract, appointment, or agreement. Determination of "full time" designation should be based on institutional recordkeeping coventions and standards. Avoid double counting; if, for example, individuals are full-time employees but their assignments involve more than one department (or campus), they should be counted as one full-time employee according to their primary or home department of assignment (or campus).

7. Highest Earned Degree

Highest earned degree information is most commonly available in personnel, payroll or budget files. Most academic institutions have a computerized system for updating highest earned degree data for professionals. If these files at your institution do not continue degree data, however, these data may be estimated using departmental records.

For purposes of this survey, earned degrees are classified in four categories:

a. Under "Doctorate Degree" include earned degrees carrying the title of Doctor, e.g., Ph.D., D. Eng., D.E.S., etc.; include individuals holding both the Ph.D. degree and any other doctorate degree.

b. Under "First-Professional Degree" include individuals whose highest earned degrees, e.g., M.D., D.D.S., D.V.M., etc., are first-professional medical degrees that represent the completion of the academic requirements based on program that require at least 2 academic years of previous college work for entrance and require a total of at least 6 academic years of college work for completion. Specifically include in line 2b first-professional degrees in Medicine (M.D.), Dentistry (D.D.S. or D.M.D.), Veterinary Medicine (D.V.M.), Podiatric Medicine (D.P.M.) and Osteopathic Medicine (D.O.). Individuals holding both the Ph.D. degree and a first-professional degree such as the M.D., should be included in line 2a as mentioned in (a) above.

c. Under "Master's Degree" include earned degrees carrying the title of Master that are above the bachelor's degree and are other-than-doctorate or first-professional degrees reported in lines 2a and 2b.

d. Under "Bachelor's degree or the equivalent" include all individuals who have successfully completed a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college level study. For the purpose of this survey, 5-year bachelor's-degree-holders may be included in this category, as well as those who are considered to have the equivalent in experience, even if they have not earned such a degree.

8. Sex of Full-and Part-time Scientists and Engineers

This survey item is collecting separate full- and part-time data on the sex of scientists and engineers for the first time. These data are usually available in central records. Programs used to respond to other requests for employment data on women may often be modified to provide specialized information on scientists and engineers.

9. Full-Time-Equivalent (FTE)

The FTE reporting concept should reflect the actual utilization of S/E professionals in various disciplines and their involvement in separately budgeted R&D activities. While headcounts are usually reported on the basis of *primary* department of assignment, FTE reporting in various NSF disciplines should reflect multiple appointments. For example, an individual with a 60-percent appointment in electrical engineering and a 40-percent appointment in computer science would be reported in FTE's in two NSF disciplines according to the 60-40-percent split in departmental assignments. Accordingly, the FTE concept converts the number of persons with part-time or split appointments among various disciplines or activities to an equivalent number of full-time persons, in accordance with institutionally agreed upon conventions. FTE's are frequently calculated by dividing the amount of time normally required of a staff member to perform a less than full-time assignment by the amount of time normally required in performing a corresponding full-time assignment.

The procedures used to compile FTE data vary from institution to institution, depending largely on the records available. Generally, there are two categories of records available to institutions–budgeting information describing the allocation of personnel resources and/or data reflecting actual rather than planned utilization of the resources.

In converting S/E headcounts into FTE's, the following method is suggested:

a. Categorize headcounts of all exempt employees in S/E departments, medical schools, agricultural experiment stations, research institutes, and other institutional organizational units into one of the NSF disciplines according to primary assignment;

b. Within each discipline, differentiate employees as being either full time or part time (according to institutional practices);

c. Calculate the full-time-equivalents of full-time S/E personnel. Use budgetary or resource utilization records to report S/E employees with split appointments between departments and/or institutional units, and distribute these data according to appropriate NSF disciplines.

d. Calculate the full-time-equivalents of part-time S/E personnel and merge them into appropriate NSF disciplines.

10. Research and Development (R&D)

R&D activities are systematic, intensive studies directed toward fuller knowledge of the subject studies. For purposes of this survey, report only the full-time-equivalent involvement of persons engaged in *separately budgeted research and development*. Separately budgeted research and development includes all activities specifically organized to produce research outcomes, and must be commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution.

Exclude: Time spent by professional employees on training grants, public service grants, demonstration projects, etc.

Estimating the division of time allocated or spent by individuals in separately budgeted R&D programs is difficult for many institutions. Again, procedures used to supply these data vary among institutions and the extent to which central reporting is feasible depends, by and large, on the degree to which budget/personnel/financial records are mechanized and linked. Among the procedures used by various institutions are the following:

a. Using some generally held criteria at the institutional or departmental levels (i.e., three-fourths for instruction, one-fourth for research);

b. Estimating separately budgeted R&D involvement or assignment obtained from payroll records, personnel records, or from employee contracts (i.e., salaries paid from separately budgeted R&D funds may be compared with total academic salaries of individuals);

c. Asking research administrators, department chairpersons, or heads of other organizational units to furnish estimates of separately budgeted R&D involvement.

d. Using faculty activity analyses in institutions where there are regularly conducted.

Federally Funded Research and Development Centers (FFRDC's)

For purposes of this survey, FFRDC's are defined as R&D organizations exclusively or substantially financed by the Government and administered on a contractual basis by educational institutions or other organizations. The following is a current list of FFRDC's administered by universities and colleges:

Ames Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
Center for Naval Analyses
Cerro Tololo Inter-American Observatory
E.O. Lawrence Berkeley Laboratory
E.O. Lawrence Livermore Laboratory
Fermi National Accelerator Laboratory
Jet Propulsion Laboratory
Kitt Peak National Observatory
Lincoln Laboratory
Los Alamos Scientific Laboratory
National Astronomy and Ionosphere Center
National Center for Atmospheric Research
National Radio Astronomy Observatory
Oak Ridge Institute of Nuclear Studies
Plasma Physics Laboratory
Sacramento Peak Observatory
Stanford Linear Accelerator Center

Classification of Disciplines of Employment in the Sciences and Engineering. Illustrative subfields include:

ENGINEERING

Aeronautical & Astronomical: aerodynamics, aerospace, space technology.
Chemical: ceramic, petroleum, petroleum refining process.
Civil: architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural, transportation.
Electrical: communication, electronic, power.
Mechanical: engineering mechanics.
Other Engineering: agricultural, industrial and management, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding.

PHYSICAL SCIENCES

Chemistry: analytical, inorganic, organo-metallic, organic, pharmaceutical, physical, polymer science (exclude biochemistry).
Physics: acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma.
Astronomy: laboratory astrophysics, optical astronomy, radio astronomy, theoretical astrophysics, X-ray, gamma-ray, neutrino astronomy.
Other Physical Sciences: used for multidisciplinary fields within physical sciences.

ENVIRONMENTAL SCIENCES (TERRESTRIAL AND EXTRATERRESTRIAL)

Earth Sciences: engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology.
Atmospheric Sciences: aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology.
Oceanography: biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics.
Other Environmental Sciences: used for multidisciplinary fields within environmental sciences.

MATHEMATICAL AND COMPUTER SCIENCES

Mathematics: algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology.
Computer Sciences: computer programming,[2] computer and information sciences (general); design, development, and application of computer capabilities to data storage and manipulation; information sciences and systems; systems analysis.

LIFE SCIENCES

Agricultural Sciences: agronomy, animal science, dairy science, food science and technology, forestry, horticulture, poultry science.
Biological Sciences: anatomy, bacteriology, biochemistry, biogeography, biophysics, ecology, embryology, entomology, evolutionary biology, genetics, immunology, microbiology, nutrition and metabolism, parasitology, pathology, pharmacology, physical anthropology, physiology, plant sciences, radiobiology, systematics, zoology, veterinary biology.[3]
Medical Sciences: internal medicine, neurology, ophthalmology, preventive medicine and public health, psychiatry, radiology, surgery, veterinary medicine, dentistry, pharmacy, podiatry, anesthesiology, chemotherapy, dermatology, geriatrics, nuclear medicine, obstetrics, gynecology, oncology, pediatrics, physical medicine and rehabilitation.

[2]Personnel employed as computer programmers should *not* be reported as professionals.

[3]Institutions with schools of veterinary medicine should distribute professionals among the appropriate disciplines (agricultural, biological, and medical) rather than report all personnel as medical scientists.

Other Life Sciences: all other health-related disciplines.[4]

PSYCHOLOGY: animal behavior; clinical psychology; comparative psychology, counseling and guidance; development and personality; educational, personnel, vocational psychology and testing; experimental psychology; ethology; industrial and engineering psychology; social psychology.

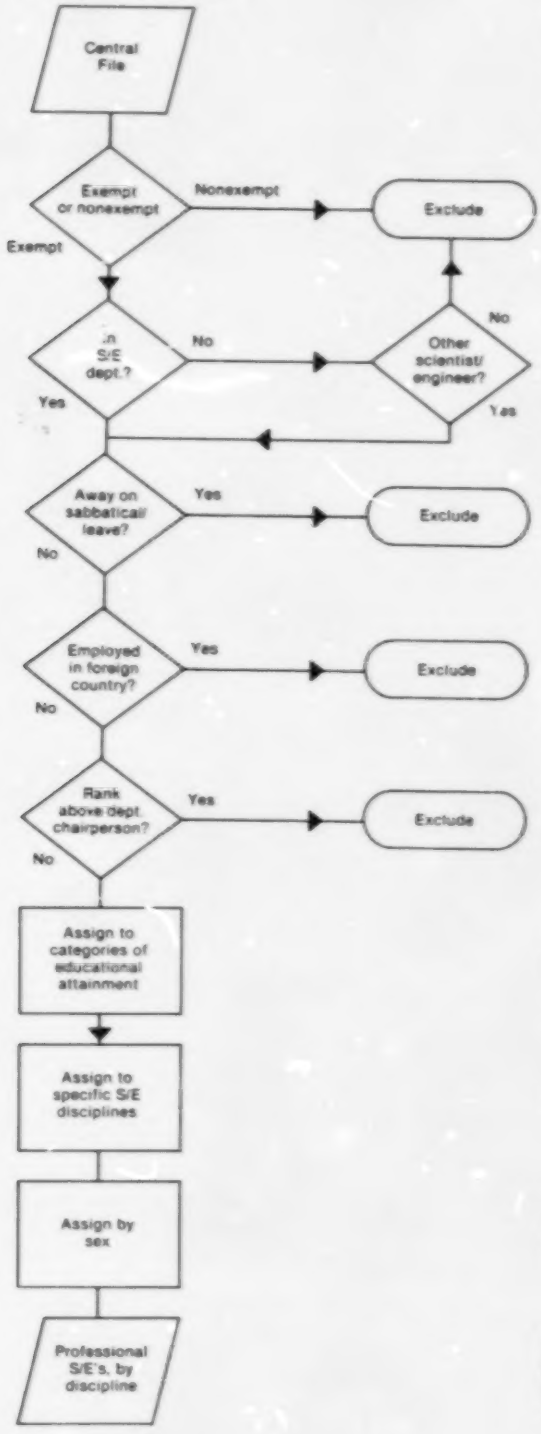
SOCIAL SCIENCES

Economics: agricultural economics; econometrics and economics statistics; history of economic thought; international economics; industrial, labor and agricultural economics; macroeconomics; microeconomics; public finance and fiscal policy; theory; economic systems and development.
Sociology: comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and social welfare, sociological theory.
Political Science: area of regional studies; comparative government; history of political ideas; international relations and law; national, political and legal systems; political theory; public administration.
Other Social Sciences: cultural anthropology, criminology, history of science, linguistics, socioeconomic geography, urban studies.

[4]*Exclude* personnel primarily involved in direct patient care.

Flow Charts

Institutions who automate NSF survey data or plan to — or even engage in manual data processing — may be assisted by these charts.



STEP 1:

Retrieve, sort, and select information from central records of institution.

Central File: Contains centralized records for all paid employees. (Note: Some affiliated entities such as medical schools may have their own central files. See below.) Examples: Personnel, payroll, or general financial records.

Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

Select scientists & engineers (incl. postdoctorates) by "home" department. Exception: if "home" dept. is not science or engineering, and person holds joint appt. in S/E department.

See section 3 in Instructions.

See section 3 in Instructions.

See section 3 in Instructions.

See section 7 in Instructions.

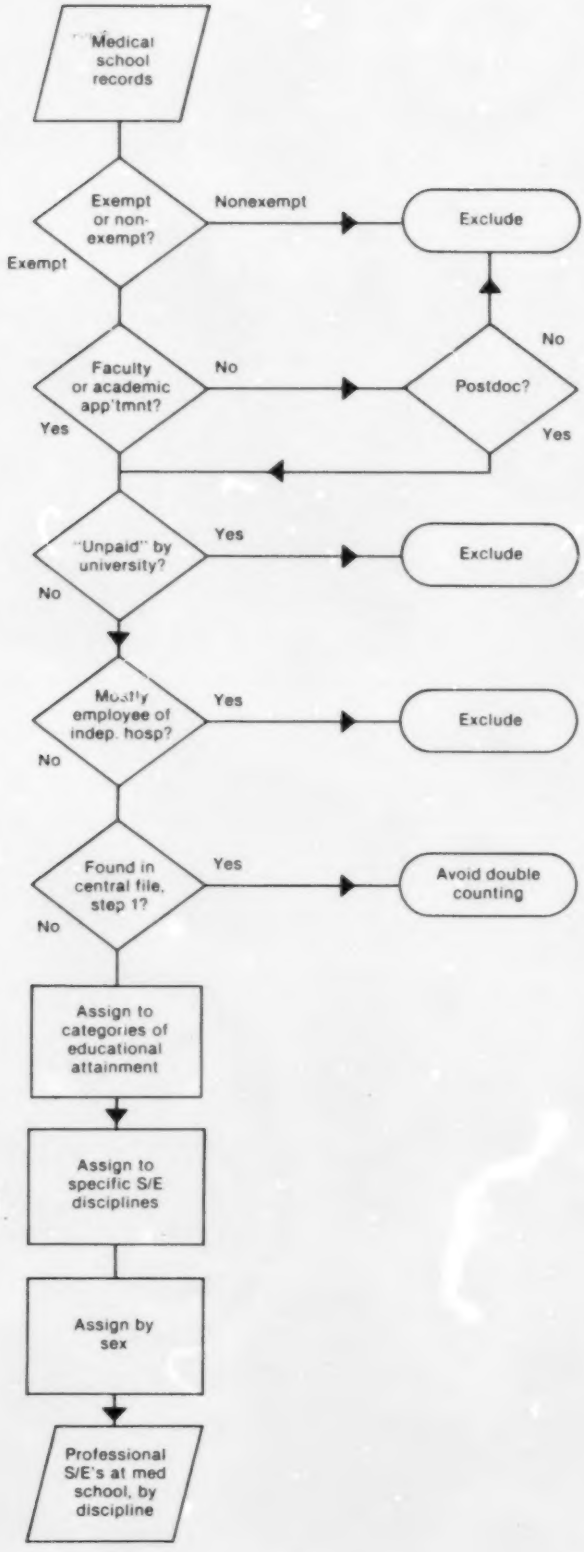
Assign to appropriate disciplines.

See section 8 in Instructions.

At this point you have extracted file containing all professional scientists and engineers covered by central records (but may be limited to those assigned to academic S/E departments in the institution proper).

STEP 2:

Collect information for medical school (if any) if not covered by central file of institution.



Refer to discussion of medical schools (Section 5 in Instructions).

Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

Do not include medical school personnel unless they have faculty or academic appointments. Exceptions: postdoctorates. (See section 5 in Instructions.)

Exclude personnel "unpaid" by the university even if paid by the medical school. Exclude voluntary staff.

Scientists whose primary employment is at independent hospitals are to be excluded even if they perform teaching/research for your institution through cooperative agreements.

Some individuals may be included in both the institution's central records and the medical school records. Count such persons only once, but keep track of split assignments for FTE figures, below.

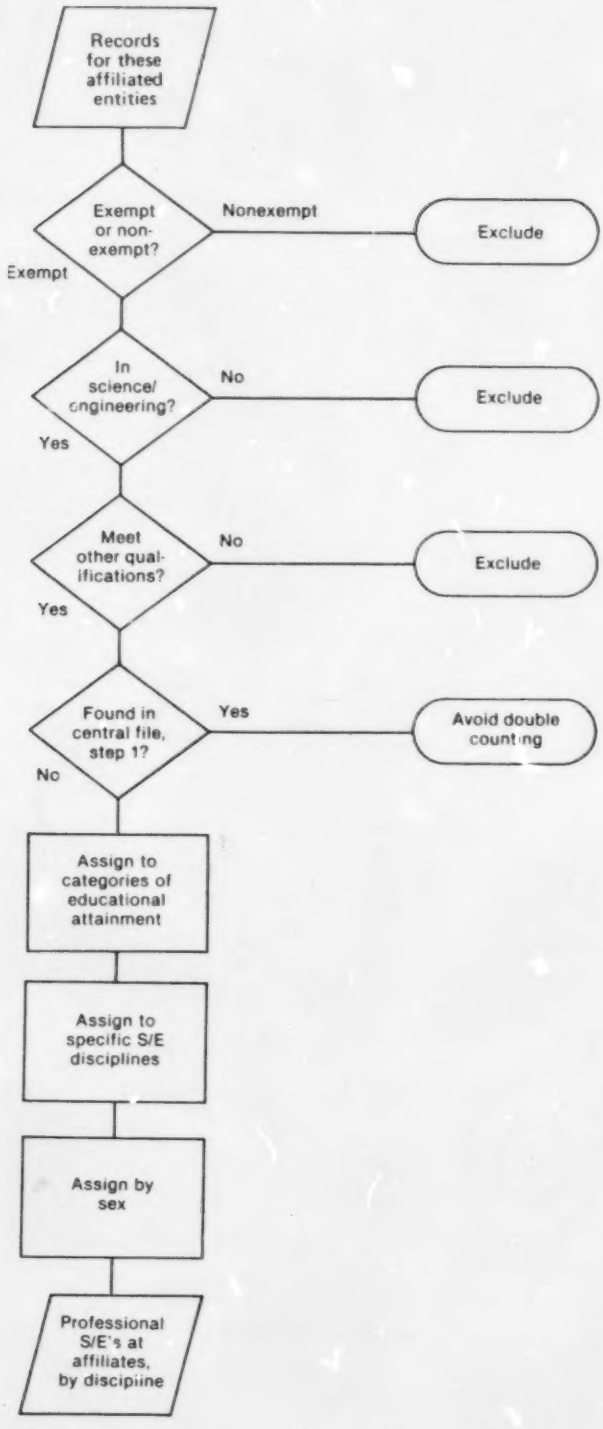
See section 7 in Instructions.

Assign to appropriate disciplines.

See section 8 in Instructions.

STEP 3:

Collect information on any remaining affiliated entities not covered by files already processed. Such entities might include a regional campus, a computer center, an agricultural experiment station or an associated research unt (except for FFRDC's), etc. Also check for postdoctorates not included in central files (see footnote to section 3 in Instructions.)



See section 1 in Instructions.

Select personnel exempt from Fair Labor Standards Act. (See section 3 in Instructions.)

See discussions in sections 3 and 4 in Instructions.

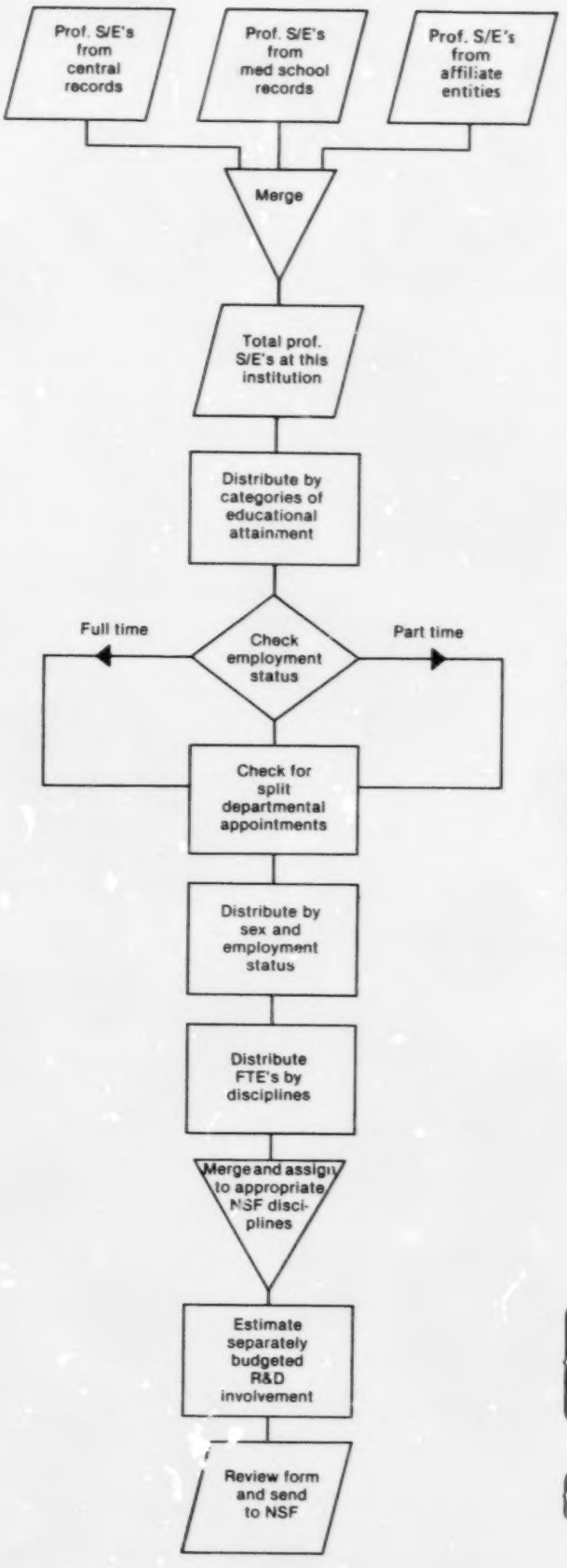
Note exclusions listed in section 3 in Instructions (e.g., exclude personnel away on sabbatical and voluntary staff).

Some individuals may be included in both the institution's central records and the affiliated entity's files (e.g., a person teaching at both the main and a regional campus). Only count such persons once, but keep track of split assignments for FTE figures, below.

See section 7 in Instructions.

Assign to appropriate disciplines.

See section 8 in Instructions.


Prof. S/E's from central records
Prof. S/E's from med school records
Prof. S/E's from affiliate entities
Merge
Total prof. S/E's at this institution
Distribute by categories of educational attainment
Full time
Check employment status
Part time
Check for split departmental appointments
Distribute by sex and employment status
Distribute FTE's by disciplines
Merge and assign to appropriate NSF disciplines
Estimate separately budgeted R&D involvement
Review form and send to NSF

STEP 4:

Merge all extracted information, compute full-time-equivalents in each discipline for both full-time and part-time personnel, and determine extent of separately budgeted R&D

If duplicate entries have not already been eliminated, it may be convenient to do so at this stage.

Data required for item 1 have now been collected

Use institutional definition for "part-time" employees. (See also discussion of "full time" in section 6 in Instructions.)

FULL TIME: Check for personnel assignments which are split across several disciplines. (See section 9 in Instructions.)

PART TIME: Use institutional conventions or practices to convert numbers of part-time personnel to the equivalent number of full-time individuals in each discipline. (See section 9 in Instructions.)

Data required for item 2 have now been collected.

For all personnel, determine the proportion of time spent in separately budgeted R&D programs. Use institution's convention or data from faculty activity analyses, salaries paid from research funds, etc. (See section 10 in instructions.)

All data required for survey have now been collected.

other science resources publications

Science Resources Studies Highlights

	NSF No.	Price
R&D Funds		
"National R&D Spending Expected to Approach $80 Billion in 1982"	81-307	----
"Real Growth in Industrial R&D Performance Continues into 1979"	81-315	----
S/E Personnel		
"Engineering Colleges Report 10% of Faculty Positions Vacant in Fall 1980"	81-322	----
"Trends in Science and Engineering Degrees, 1950 Through 1980"	81-320	----
"Science and Engineering Faculty With Recent Doctorates Fell to One-Fifth of Total in 1980"	81-318	----
"University S/E Faculty Spend One-Third of Professional Time in Research"	81-317	----
"Employment Opportunities for Ph.D. Scientists and Engineers Shift From Academia to Industry"	81-312	----
"Tenure Practices in Universities and 4-Year Colleges Affect Faculty Turnover"	81-300	----
"Employment of Scientists and Engineers Increased Between 1976 and 1978 But Declined in Some Science Fields"	80-305	----

Detailed Statistical Tables

	NSF No.	Price
R&D Funds		
Federal Funds for Research and Development, Fiscal Years 1980, 1981, and 1982, Volume XXX	81-325	----
Research and Development in Industry, 1979: Funds, 1979; Scientists and Engineers, January 1980	81-324	----
Research and Development in State and Local Governments, Fiscal Year 1977	79-327	----
S/E Personnel		
Scientists, Engineers, and Technicians in Private Industry, 1980	81-329	----
Federal Scientific and Technical Personnel, 1976, 1977, and 1978	81-309	----
Scientists and Engineers From Abroad, 1976-78	80-324	----
Characteristics of Doctoral Scientists and Engineers in the United States, 1979	80-323	----
U.S. Scientists and Engineers, 1978	80-304	----
Characteristics of Experienced Scientists and Engineers, 1972	79-322	----

Reports

	NSF No.	Price
R&D Funds		
Federal Funds for Research and Development, Fiscal Years 1979, 1980, and 1981, Volume XXIX	81-306	$3.75
Problems of Small, High-Technology Firms	81-305	----
S/E Personnel		
Women and Minorities in Science and Engineering	81-302	In press
Activities of Science and Engineering Faculty in Universities and 4-Year Colleges, 1978-79	81-323	In press
Young and Senior Science and Engineering Faculty, 1980	81-319	----
Foreign Participation in U.S. Science and Engineering Higher Education and Labor Markets	81-316	$4.75
Science and Engineering Employment: 1970-80	81-310	$2.75
The Stock of Science and Engineering Master's Degree-Holders in the United States	81-302	----
Employment Attributes of Recent Science and Engineering Graduates	80-325	$1.75
Occupational Mobility of Scientists and Engineers	80-317	$1.75
Employment Patterns of Academic Scientists and Engineers, 1973-78	80-314	$1.75
Composite		
National Patterns of Science and Technology Resources, 1981	81-311	$5.50
Science and Engineering Personnel: A National Overview	80-316	$4.25